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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

Vol. 112, No. 7

July 1988

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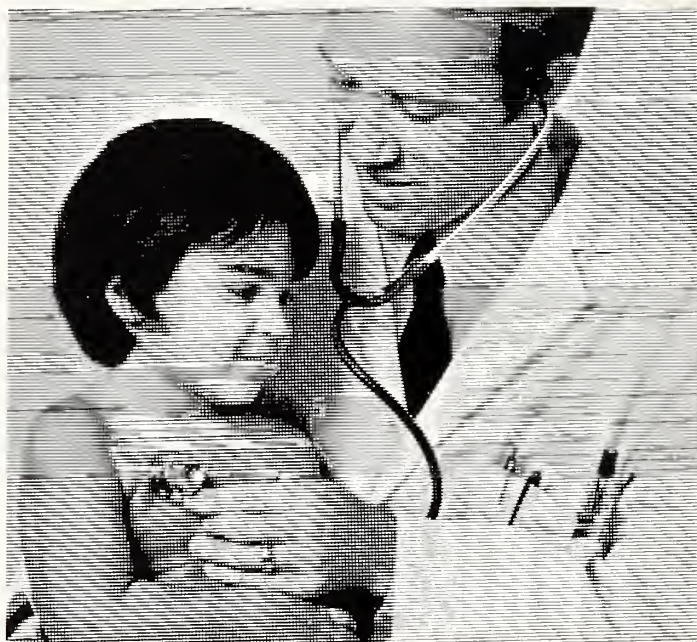
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On Our Cover: The Rosalie House, one of many restored Victorian homes in Eureka Springs. Photo by the Arkansas Department of Parks & Tourism.

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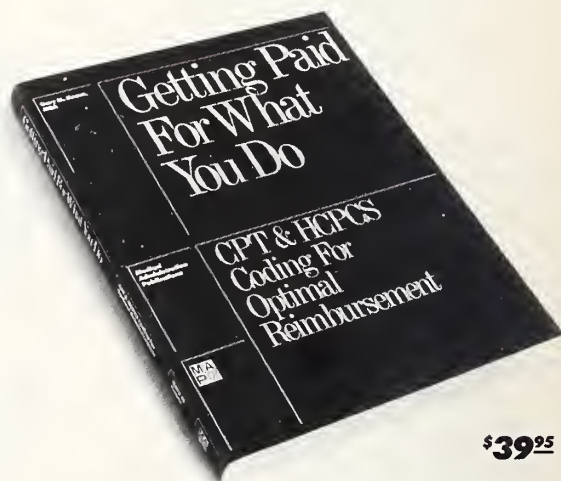
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On Our Cover: Music abounds in Arkansas and one of the best places to hear it is at the Ozark Folk Center in Mountain View. Photo by the Arkansas Department of Parks & Tourism.

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- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
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Adverse Reactions: (percentage of patients)
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THE JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

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Business Manager

Martha S. Taylor
Managing Editor

David Wroten
Advertising Manager

Alfred Kahn, Jr., M.D.
Editor Emeritus

Editorial Board

Dr. David Barclay
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- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
 - Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
 - Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1.5%.
- usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
 - As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
 - Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
 - Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia.
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(501) 224-8967

Ken LaMastus
Business Manager

Martha S. Taylor
Managing Editor

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Advertising Manager

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Editor Emeritus

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Our Cover: The cover photo was taken by Donald E. Steely, a first year medical student at the University of Arkansas for Medical Sciences.

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Martha S. Taylor
Managing Editor

David Wroten
Advertising Manager

Alfred Kahn, Jr., M.D.
Editor Emeritus

Editorial Board

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2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

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Carcinogenesis, Mutagenesis, Impairment of Fertility — A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the incidence of enterocryptin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement as compared with concurrent controls and evidence of mid liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with evidence of a carcinogenic effect in rats, male mice, and female mice given up to 360 mg/kg/day, about 60 times the human dose, and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, prenatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects — Pregnancy Category C — Oral reproduction studies in rats at doses up to 500 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses and depressed body weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spinal bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers — Studies conducted in lactating women have shown that <0.1% of the administered oral dose of nizatidine is secreted in human milk in proportion to plasma concentrations. Caution should be exercised when administering nizatidine to a nursing mother.

Pediatric Use — Safety and effectiveness in children have not been established.

Use in Elderly Patients — Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients receiving nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among reported adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs < 0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events were also reported; it was not possible to determine whether these were caused by nizatidine.

Hepatic — Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in placebo-controlled trials, possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT/SGPT enzymes (greater than 500 IU/L) and, in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular — In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS — Rare cases of reversible mental confusion have been reported. **Endocrine** — Clinical pharmacology studies and controlled clinical trials showed no evidence of androgenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic — Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H₂-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Intestinal — Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity — As with other H₂-receptor antagonists, rare cases of anaphylaxis following administration of nizatidine have been reported. Because cross-sensitivity in this class of compounds has been observed, H₂-receptor antagonists should not be administered to individuals with a history of previous hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other — Hyperuricemia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine administration have been reported.

Overdosage: Overdoses of Axid have been reported rarely. The following is provided to serve as a guide should such an overdose be encountered.

Signs and Symptoms — There is little clinical experience with overdosage of Axid in humans. Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous median lethal doses in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

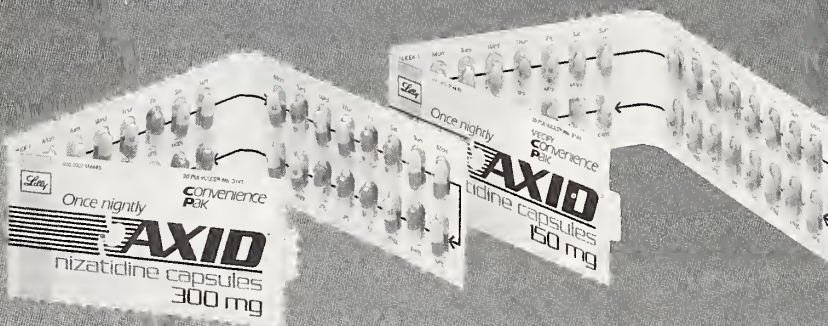
Treatment — To obtain up-to-date information about the treatment of overdose, a good resource is your certified regional Poison Control Center. Telephone numbers of certified poison control centers are listed in the Physicians' Desk Reference (PDR). In managing overdose, consider the possibility of multiple drug overdoses, interaction among drugs, and unusual drug kinetics in your patient.

If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance.

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***PROCEEDINGS
112TH ANNUAL SESSION
OF THE
ARKANSAS MEDICAL SOCIETY
LITTLE ROCK, ARKANSAS
APRIL 21 - 24, 1988***



*John M. Hestir, M.D.
President
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1988-1989
DeWitt, Arkansas*

INAUGURAL ADDRESS

Medicine in Arkansas has come a long way since I graduated from the University of Arkansas medical school in 1955. Back then, the general practitioners saw the patients first and if they thought it was necessary, they referred the patients to specialists. Most of the specialists were in Little Rock.

In 1965, there came a change which would effect medicine and cause a drastic change in medicine. It was brought about by an Arkansan, a representative to Congress - Wilbur Mills, Chairman of the Ways and Means

Committee. They passed the Medicare and Medicaid laws which would form, shape, and change medicine. These laws were to give equal medical care to the poor and aging. There was a mandate for medicine to meet this challenge.

Specialists multiplied in all fields. The larger cities overflowed with specialists and then the smaller cities, too. Patients began to refer themselves to specialists and the general practitioners were ignored like the third verse of a Baptist hymn.

Medicare and Medicaid continued to grow. The health of Americans was improved, the length of life continued to increase and the price of medical care continued to rise.

As Abraham Lincoln said approximately 100 years ago, "The government can only take from you what they have given you." The government now, through various means, is limiting the availability of medical care to the poor and elderly. In order to control and regulate the Medicare and Medicaid programs, another agency was created which would have a far-reaching effect on medicine. This agency came into being in 1986 and is called the Health Care Finance Administration, or HCFA. Just the acronym "HCFA" sounds cold, sinister, and impersonal. HCFA has created an anxious, fear-like reaction among the practicing physicians. Doctors are being treated like criminals by HCFA with threats, fines, and restrictions on their practice.

HCFA has created a division among our community. Physicians are either "participating" or "non-participating". HCFA has tentacle-like projections in each state of the union. In our state it is the Arkansas Foundation for Medical Care, Inc., which was created in 1972.

The medical society headquarters receives letters daily from concerned doctors in each corner the state. The letters are about the actions and decisions of the Arkansas Foundation for Medical Care and the physicians are asking the Society to do something to correct the actions, powers, and functions of the Arkansas Foundation for Medical Care.

The Arkansas Medical Society has no connection with the Foundation. The medical society has no control over the Foundation or influence over the Foundation. The only role that the Arkansas Medical Society can play is to keep the lines of communication open between physicians and the Foundation.

The Foundation belongs to the doctors of the state of Arkansas. It is your organization. If you are not satisfied with the way the Foundation is conducting business, if you're unhappy with the executive committee, or if you're unhappy with the governing staff, I urge you to attend the meetings and become involved in the Foundation.

Doctors, HCFA is here to stay. Medicine is now a regulated profession and HCFA are the regulators. It tells you how to practice medicine, when and what to do.

It is an entity without human compassion. Doctors, you are going to have to become involved. You are going to have to attend the meetings, and you are going to have to protect your own future. You are going to have to vote.

I know that some of you have read that the Florida Medical Society intervened in the PRO in the federal courts, and have won the case. In fact, the federal judge urged the society to continue with the suit. I feel that if the doctors in Arkansas would become more involved in the elections and activities of the Arkansas Foundation, they would never be required of this society.

Get involved. Go to the meetings. Vote and elect who you feel best governs, leads, and guides your foundation. Peer review is a necessary evil and it will continue to be conducted with or without your input. Again, I urge you to attend, vote, and take interest.

The annual meeting of the Arkansas Foundation for Medical Care will be held at 1:00 p.m., Saturday, May 14th at the Little Rock Hilton Inn. Make your opinions and wishes known to the nominating committee. Be there.

A prominent state legislator has asked the Society to take an active role in a program for indigent medical care. Unfortunately, it has been shown that a large number of malpractice suits are brought by "indigents and people on Medicaid." However, I have never refused treatment to a patient because they did not have money nor do I know of any physicians in my area who has.

In response to this legislator's request, the Society is looking very closely at an indigent health care program recently initiated in Kentucky. I know Dr. Jouett has talked with individuals responsible for this program. The participation by their physicians and the response from the community has made it one of the most successful programs instituted by the Kentucky Medical Society.

I feel this would be a great project for the Arkansas Medical Society to undertake. It will certainly return human compassion to our practice. This program is being developed and will be discussed thoroughly, and I certainly hope it will be approved by the House of Delegates for further development with the aid of the legislature and Governor Clinton.

**PROCEEDINGS
112TH ANNUAL SESSION
OF THE
ARKANSAS MEDICAL SOCIETY
LITTLE ROCK, ARKANSAS
APRIL 21 - 24, 1988**

**First Session
House of Delegates
Thursday, April 21, 1988**

Speaker of the House Amail Chudy called the House of Delegates to order at 1:00 p.m., on Thursday, April 21, 1988, at the 112th meeting of the Arkansas Medical Society Annual Session. He called upon Payton Kolb to give the invocation.

Members of the Society seated as delegates and officers were: Drs. Robert Baker, Baxter; Carlton L. Chambers, III, Boone; Joe H. Wharton, Bradley; Danny Berry, Chicot; Thomas L. Eans, Cleburne; Scott McMahan, Columbia; Joe H. Stallings, Jr., Don B. Vollman, Jr., and Robert Frey, Craighead-Poinsett; Steve Schoettle, Crittenden; Willard Burks, Cross; J. J. Magie, Faulkner; Lee Atherton, Brenda Powell, Eugene Shelby, and Luther Walley, Garland; Richard Martin, Greene-Clay; Jim McKenzie, Hempstead; C. Randolph Ellis, Hot Spring; Anna Ridling and Gary Frigon, Jefferson; Ralph Joseph, Lawrence; Paul Meredith, Miller; Eldon Fairley, Mississippi; J. R. Kendall, Ouachita; Robert D. Miller, Jr., Phillips; Frank Lawrence, Pope; Glen Baker, Raymond Biondo, James Cornett, Gilbert Dean, James Hagler, Edwin Hankins, J. Timothy Hodges, Jerry Holton, Fred Kitter, Marvin Leibovich, James McDonald, James J. Pappas, J. Mayne Parker, Charles Rodgers, Robert Shannon, and Frank Sipes, Pulaski; Marvin N. Kirk, Jr., Saline; Samuel Koenig, Jr., Jerry Stewart, and William Schemel, Sebastian; Michael Moody, Tri-County; John A. Hall, Van Buren; Gareth Eck, Anthony Hui, J. Warren Murry, David Rogers, and Earl B. Riddick, Jr., Washington; James L. Maupin, Yell; Kyle McAlister, Resident Physician Section; and Matthew Garner, Medical Student Section. Councilors, Merrill J. Osborne, J. Larry Lawson, Hoy B. Speer, Jr., L. J. P. Bell, Lloyd G. Langston, Cal R. Sanders, James D. Armstrong, Ronald J. Bracken, Char-

les Logan, William Jones, Morton Wilson, and A. C. Bradford. President-elect, John M. Hestir; Secretary, James R. Weber; Vice Speaker of the House, Sybil Hart; Past Presidents, A. E. Andrews, Asa A. Crow, John Burge, C. C. Long (Honorary), Ross E. Fowler, W. Payton Kolb, Ben N. Saltzman, and Purcell Smith, Jr.

Speaker Chudy asked that the lights be lowered for the viewing of a film provided by Arkansas Power and Light Company. The film entitled, "Arkansas" depicts the attributes of this great state in which we live.

Vice Speaker Sybil Hart introduced the President of the Arkansas Medical Society Auxiliary, Mrs. James Gardner and asked that she come to the podium. Mrs. Gardner addressed the House as follows:

**Auxiliary President's Address
Mrs. James Gardner**

"Mr. Speaker, Dr. Jouett, Members of the House of Delegates, and honored guests:

Thank you again for the opportunity to appear before this distinguished body. I bring you greetings and thanks from the Auxiliary for all your support this year.

As I think back on my year as President, I am filled with memories that in no other organization could I have experienced. In my many travels across the state of Arkansas visiting auxiliaries, I saw Auxilians busy at work in their communities in such projects as teenage suicide prevention, drug abuse prevention, tobacco education, AIDS education in the community, and others.

Auxilians were busy in raising over \$15,000 for the AMA Educational Research Foundation. We also earned money for our loan funds, scholarships for nursing students, Med-Camps, and many local health related projects.

Auxilians across the state participated in an AIDS Education Resource Directory. The Arkansas Depart-

ment of Health printed this for us through a federal grant earmarked for AIDS-related projects. All Arkansas Medical Society members, public and private schools, hospitals, survey participants, survey volunteers, and others who requested the directory will receive a copy.

Another goal this year was to make our new room at the Arkansas Medical Society office into a working place. The results have been great. We now have a lovely room that is also functional. We thank you for furnishing us a telephone.

During this convention we are preparing for our next legislative session by conducting intense legislative workshops and we are in the process of forming support groups for spouses of impaired physicians and support groups to families of physicians involved in malpractice litigation.

Last June we had eight people attend the national AMA Auxiliary convention. We had a total of nine attend the leadership confluence. Thanks to your generous contributions, we gained training and knowledge that we can pass on to our state and local auxiliaries.

I appreciated the opportunity to sit in on the Public Relations Committee, the Council meetings, and the meeting in Hot Springs with Congressman Beryl Anthony. As I listened to each committee taking care of business at hand, I wondered how you ever had time for other things.

Our membership is up again this year and I do hope your spouse is an active member of our organization. Last year I told you that I am convinced that physicians select and marry intelligent spouses who are often well-qualified and trained in their own right. This year it has been pointed out to me many times that well-trained and intelligent people select physicians as their spouses."

Vice Speaker Hart introduced Mrs. W. Ray Jouett, President-elect of the Arkansas Medical Society Auxiliary and invited her to come to the podium.

Auxiliary President-elect's Address

Mrs. W. Ray Jouett

"Dr. Chudy, Ladies and Gentlemen, and Delegates: It is a privilege to serve as President of the Arkansas Medical Society Auxiliary during the year 1988-89.

We are making plans to focus attention on four important issues: (1) legislation, (2) health project - adolescence health, (3) developing support groups for the impaired physician family and the malpractice trauma family, and (4) membership.

We are looking forward to a busy year planning workshops in four districts of the state specifically addressing these issues.

If your spouse does not belong to Auxiliary, won't you encourage her to become a member? We want her in-

cluded with us, for all together we are your Arkansas Medical Society Auxiliary.

Thank you."

Vice Speaker Hart introduced Mrs. Gary Strebel of Oklahoma City, Oklahoma, who is the AMA Auxiliary Legislative Chairman.

AMA Auxiliary Legislative Chairman's Address Mrs. Gary Strebel

"Good afternoon. I'm delighted to be here with you in Arkansas, which I have to say is one of my very favorite states. I will certainly agree it is one of the most beautiful. Living in a neighboring state, we spend a lot of time in Arkansas, so it's always really pleasant to come back.

Dr. Hotchkiss, Dr. Jouett, Madam Speaker, Madam Vice Speaker, Mr. Speaker, Delegates, Members and honored guests. I am so pleased to have this little bit of an opportunity to talk to you today because it gives me a chance to talk to you about what I feel is one of the most vital elements in the AMA Auxiliary's efforts to make a difference in the quality of health for others. That is the element of team work between medical societies and medical auxiliaries.

For years the AMA Auxiliary leaders have promoted the benefits of partnership between medical societies and auxiliaries to strengthen the efforts of both organizations to meet the concerns of physicians and their families. We are pleased to see so many auxiliaries and medical societies across this country doing just that.

Certainly I know that what's going on in the state of Arkansas from talking to Mary Gardner and Ramona Taylor about your legislative efforts and your health projects. It is like talking to the choir but, nevertheless, I will tell you why I feel it is so important that we continue this kind of team work.

It's more important than ever before to positively affect the challenges that are shaping our world of tomorrow. And I would like to mention just a few, if I might.

A medical/auxiliary team is needed to help solve the many health problems that are plaguing our communities today. Just one of these problems is adolescent health. You know that we have joined the AMA in its initiative to stop the decline in our nation's youth. This is an effort that we all must be involved with because our nation's youth are our leaders of tomorrow.

In legislation, more than ever before, our team is needed to influence our legislators to pass legislation which will ensure that quality health care is available for each and every citizen of this country and that your physicians are accorded the right to practice medicine in the high standards that your patients have come to expect.

We, the auxiliary, know personally the effect that recent legislation has had on you and upon your patients. Medical societies and auxiliaries working together made a major impact on 28 health care issues of the 99th Congress. And out of this 100th Congress, we had unprecedented success on AMA resolutions in both the House and the Senate to defeat physician DRGs and mandatory assignment to this point. But we must continue to keep our ears to the ground in our fight against this kind of legislation.

Perhaps today, more than ever before, the old adage "Together we stand, divided we fall," has never been truer for us in the medical community. We must continue to give our legislators a unified voice in our efforts to seek sound medical legislation so that we will continue to provide for the citizens of this nation the very best health care in the world.

The third area where our team can make a difference is in medical education. The cost of medical education has risen so sharply that most of our young physicians are going into practice deeply in debt and their sources of funding are disappearing, both privately and publicly. We must continue to support the work of the AMA Education and Research Foundation in its efforts to ensure quality medical education.

Finally, our team efforts must support the medical family. Today's changing environment is placing an incredible stress on the family. I believe that with auxiliary and medical societies working together we can provide the services that will enable our families to cope.

Our medical auxiliary/medical society team has the potential to impact each one of these areas: adolescent health, legislation, medical education, and stress in the medical family. And if we work together to reach that potential, striving to reach each of our organizations' mutual goals, we will continue to be the number one winning team in today's fight for good health.

Thank you so much for allowing me to be with you today and I wish you much success in the days ahead during your House of Delegates meeting. I look forward to having the opportunity to visit with you for the next couple of days. Thank you again."

Speaker Chudy asked that Mrs. James Gardner, Mrs. David Williams, AMS Auxiliary AMA-ERF Chairman, and Dr. I Dodd Wilson, Dean of the University of Arkansas College of Medicine, come to the podium. Dr. Chudy presented two checks to Dr. Wilson on behalf of the American Medical Association Education and Research Foundation. One check for \$4,992.50, intended for the pursuit of excellence in the Medical School's program, was given for unrestricted use. Another check in the amount of \$12,716.94, restricted to the school's program for financial assistance to medical students, was also given to Dr. Wilson. Dr. Wilson thanked the Auxiliary for their contribution in collecting these funds.

Speaker Chudy delivered an announcement from Dr. Robert Watson, Chairman of the History of Medicine Associates at the University of Arkansas for Medical Sciences. The announcement was as follows: "The History of Medicine Associates are about to complete a project to place historical site markers at all previous locations of the College of Medicine. One of the markers, the one at the Old Statehouse, is already mounted if you'd like to walk over and see it while you're here. It is in an alcove on the east side of the main building where other historic plaques are mounted.

On June 11, 1988, at 2:30 p.m., a ceremony will be held to mark the placement of the sight at the first location, 113 West Second. You're invited to attend that ceremony if you can."

Speaker Chudy asked Dr. Clifford Montgomery, a representative from AMPAC and Dr. John Crenshaw to come to the podium. Dr. Montgomery's address is as follows:

Clifford Montgomery, M.D. **AMPAC Representative**

"Mr. Speaker, President Hotchkiss, Dr. Crenshaw, Delegates and friends. It's a real privilege for me to be here in Little Rock today to greet you on behalf of AMPAC and the American Medical Association.

I'd be remiss if I didn't take this opportunity to thank you for the privilege of representing you on the AMPAC board. It's a real honor to bring to ARKPAC a special award this year for a large increase in overall membership from the previous year. What can we look forward to in the coming year?

Already ARKPAC has improved its membership over last year to date. As you continue to work and recruit, nothing is really impossible. However, let me turn to something equally exciting. Let me talk to you about what you in Arkansas have done this past year.

I was fortunate to address your PAC at a political education seminar in this city last year. The day following, your leadership and your House made the far-reaching decision to assess yourselves and your members to organize a division of public affairs. This has enabled the Arkansas Medical Association to organize and procure a staff which will allow you to formally lobby the Arkansas legislature and will provide PAC support for your association. In PAC circles what you did was provide "soft" dollars for an effective program of political action.

Now's the time for you to take that all-important second step: to push recruitment of membership so that your PAC can raise sufficient "hard" dollar funds to support your choices in the Congress and the Arkansas legislature in a meaningful manner. Direct involvement, support, and contribution can, indeed, be very effective in electing friends of medicine.

In a personal conversation with Congressman Anthony, within the last two weeks, he recently praised the efforts of the doctors of Arkansas for their interest and support of him in his efforts on your behalf. Your support was appreciated and duly noted.

Don't forget to include your auxiliary in your plans. They will be of unbelievable support and assistance in your PAC. Candidate support activities are absolutely best done by your spouses. Let them make you look good.

So much for advice. You're a fine example for any medical association of your size. Your concept of a division of political affairs is a model. AMPAC will hold you up to other organizations as an example of good and effective political action.

Dr. Crenshaw, here is the well-deserved special membership award presented to ARKPAC by your friends at AMPAC and federation of medicine. My congratulations to you. Thank you very much."

Speaker Chudy called upon Dr. A. E. Andrews to introduce the President of the American Medical Association, Dr. William S. Hotchkiss, from Chesapeake, Virginia. Dr. Hotchkiss' address is printed elsewhere in this issue of the *Journal*.

Upon a motion which was seconded from the floor, the minutes of the 111th House of Delegates were approved as printed in the June 1987 issue of the *Journal of the Arkansas Medical Society*.

Upon a motion which was seconded from the floor, the minutes of the October 4, 1987, House of Delegates were approved as printed in the November 1987 issue of the *Journal of the Arkansas Medical Society*.

Speaker Chudy announced that two committee reports were inadvertently omitted from the March issue of the *Journal of the Arkansas Medical Society* - the Medical Services Review Committee and the Eighth Councilor District of the Professional Relations Committee, both chaired by Dr. Charles Rodgers of Little Rock. Both reports were mailed to delegates prior to the meeting and were assigned to Reference Committee Two. (These reports are printed after the final House of Delegates minutes in this issue of the *Journal*.)

Speaker Chudy announced the vacancies of the Arkansas State Board of Health in Congressional Districts #1 and #5. District #1 position is currently being held by Don Vollman who is eligible for re-appointment. District #1 consists of Clay, Craighead, Crittenden, Cross, Greene, Lee, Mississippi, Phillips, Poinsett, and St. Francis Counties.

The District #5 position is currently held by James Maupin of Dardanelle. Dr. Maupin is eligible for re-appointment. District #5 consist of Conway, Faulkner, Perry, Pope, Pulaski, and Yell Counties.

Three nominations are required from both districts for the Arkansas State Board of Health.

Speaker Chudy announced a vacancy in District #1 of the Arkansas State Medical Board. The position is currently being held by B. P. Raney of Jonesboro. Dr. Raney is eligible for re-appointment. The counties in District #1 are listed above. Only one nomination is required for this appointment.

Speaker Chudy reminded the 1988-89 Nominating Committee that they were to meet immediately following the House of Delegates to organize by electing a chairman and secretary. 1988-89 Nominating Committee members are Richard Martin, Paragould; Michael Moody, Salem; Robert Miller, Helena; Lee B. Forestiere, Pine Bluff; Raymond Bowman, El Dorado; James Armstrong, Ashdown; Brenda Powell, Hot Springs; Charles Logan, Little Rock; Robert Langston, Harrison; and Frank Lawrence, Russellville.

Speaker Chudy called upon Dr. Charles Logan, Chairman of the 1987-88 Nominating Committee, for a supplemental report of the Nominating Committee. Dr. Logan announced the resignation of Dr. Richard Pearson of Rogers from the Council as a Ninth District Councilor. The name of J. Warren Murry of Fayetteville has been submitted from that district to complete the unexpired term. Dr. Pearson's name had also been submitted by the Committee as an alternate delegate to the AMA to be voted on at the Sunday House of Delegates meeting. The Committee wished to withdraw Dr. Pearson's name and replace it with Dr. John P. Burge of Lake Village

Speaker Chudy reported that there was a new item of business to be brought before the House. All new items of business must have two-thirds consent of attending delegates for introduction.

The report concerns the "Indigent Care Program of Kentucky". This report was presented to both the Executive Committee and the Council of the Arkansas Medical Society. Both bodies asked that it be brought before the House and sent to the appropriate Reference Committee for review. Upon a motion and second, the delegates voted to accept the report and Speaker Chudy assigned the report to Reference Committee One for review.

There being no further items of business, the House adjourned for members to attend the Reference Committee meetings. The next House of Delegates was scheduled for Sunday, April 24, 1988, at 11:00 a.m.

ADDRESS

PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION

William S. Hotchkiss, M.D.

I have known Dr. Andrews for a long time but I didn't know that he was a fellow Texan. So, we both got away. There are places in Texas where the air is so clear you can see straight ahead for two days.

I enjoy visiting state and county societies and talking to you about what is going on in the AMA and the Federation. There are a great many problems.

I don't usually tell jokes. My wife is my best advisor, councilor, and critic and she always says, "Don't try to tell jokes. You're not a very funny guy - you just look funny." Anyway, there is a story of three friends who loved to hunt caribou in Canada. They went up there every year to hunt for a week. They had to charter a plane to get in because there wasn't anyplace to land, just a small meadow. So the plane brought them in up there. They came over the snow-covered mountains and the trees and landed in this little meadow. The pilot let them off and said, "I'll be back for you in a week. Remember, just one caribou, that's all I can carry in this plane." They agreed. In a week the pilot came back and there they were with three caribou, one each. He said, "I told you just one. There's not room in this plane for three and that's all you can take." They said, "You said that last year, too, but we gave you \$50 extra a piece and you agreed to take them. This year we're raising the ante to \$100 a piece." So they agreed and they pushed and shoved the caribou in and climbed on top of them. The plane went to the end of the runway and shuddered and shook. It finally took to the air but it didn't quite clear the trees and they crashed into the branches. There were caribou and hunters and guns and pieces of plane spread all over them. No one was hurt very bad, they weren't going very fast. But one of them was a little dazed and he looked over to the next one, shook his head and said, "Where are we?" The second one said, "We're about 100 yards from where we crashed last year."

I don't think there is any analogy to draw from that but you could say that if you can't learn from history, you'll have to repeat it. I surely don't think that medicine is heading for a crash.

There are a great many things we are addressing at the AMA and in the Federation. I'll just name a few because it's impossible to discuss all of them; time simply does not permit.

We are interested in animal research which is threatened by a lot of kooks who are trying to destroy the laboratories. Some of them are almost terrorists.

We are certainly concerned with professional liability. I would like to talk about that because that's the biggest threat we have to the continued ability to provide high quality care to the American people.

AIDS is a scientific threat and the epidemic that seems to be looming ahead.

We're concerned with indigent care. I'm most impressed with the program I heard discussed this morning in your council which addresses providing care for the poor.

There needs to be reform of the Medicare system because the Part A trust fund is heading for bankruptcy by the year 2000. After that, it will run deficits of the incredible figure of \$100 billion a year and it will be in debt by \$1 trillion by the year 2010, if you can wrap your mind around that kind of figure. There has to be major reform of the Medicare plan.

I'm glad one of the previous speakers addressed adolescent health and Cliff Montgomery talked about the PAC activity. Everybody is concerned with PROs and I felt it was a very nice session we had this morning. This is being discussed at every state society - usually with a lot more heat than it was here this morning. I thought you folks behaved marvelously.

It is true that the PRO is doing what it has to do, largely. Dr. Roper was at our February board meeting and we were concerned with the payment denial letters. That isn't really PRO, it's the contract payers who make those denials but they are first cousins, those two. Dr. Roper likes to blame it on Congress or somebody else. He says he just makes the regulations as he is directed, but he has a little glint in his eye. I think he enjoys it.

Dr. Roper and the AMA go back a long way. He was the first resident member of the Council on Scientific Affairs when it was formed in the mid-70s. He is a pediatrician, of course, from Alabama. I don't know how he got into the Reagan White House for a while, but when the HCFA chairmanship opened up, he took that over.

We talked to him pretty hard about the payment denials and he does listen. He promised that he would do something about it. There was supposed to trip into ef-

fect a definite change about denials on April 1st. He has sent a letter out, which I'm sure some of you have seen, directing all the carriers to set up a file to investigate and confer with the doctor and go through a little more procedure before they send ugly letters. This change has been in effect only a short time so I don't know how well it's going to work out. At least, Dr. Roper appears to try.

There is a nursing shortage. There's mandatory assignment which I'm going to speak about in a little more depth. I think one of your members is very active in the relative value scale issue and he probably keeps you informed.

Mandatory Assignment

Mandatory assignment is, I think, a very real threat to the practicing physician this year. Mandatory assignment, of course, came to light in the fall of 1983 when it was proposed in the national congress. The AMA brought a lot of men and women physicians to Washington to lobby the people on the major committees and we succeeded in defeating mandatory assignment in the fall of '83. We did it all over again in the spring of '84.

But you win these things once and they come back again. The next place it surfaced was in Massachusetts when Governor Dukakis got it through and connected it with re-licensing. Now every doctor has to agree to accept assignment on all Medicare patients to re-new his or her license.

What about mandatory assignment? What is it? Pure and simple, it is a discounted fee. The Medicare economic index, which was started in 1973 or 1974, has simply not kept pace with inflation. Certainly not with the pace of inflation of medicine. Medicine is a labor-intensive activity in our hospitals and our offices and it increased two to three percent a year when we aren't frozen. We have been frozen for quite a few of these years so we fall further and further behind our usual fees. When we accept assignment, we are discounting our fee.

Doctors have discounted fees forever, all the way from 100% to ten or whatever is in between. I certainly think it is appropriate that we discount. But I think we ought to be able to decide who we discount to on the basis of need. That seems reasonable to most of us, but that isn't what mandatory assignment says. It says that you'll discount these fees on the basis of age. Everybody who gets to be 65, even if they are a multi-millionaire, gets a discounted fee if you accept assignment.

That just doesn't sound reasonable and you ask yourself why would Congress or a state enact a law that is unfair. I think it's pretty simple: it's politics. There are 30 million Medicare beneficiaries and there are a half a million, probably 560,000 physicians in the United States. If there's anything legislators know how to do, they know how to count. They count real good. They know that those people, the Medicare beneficiaries, are going to the

polls and vote a whole lot more than we can. So that's why we have mandatory assignment.

Now this thing is spreading around the country. Rhode Island and Vermont put it in. The important thing is that about fifteen or sixteen states had mandatory assignment introduced into their legislative body in 1987. Most either defeated it temporarily, held it over or passed it over until 1988.

The majority passed it on with the statement that it would be looked at again in 1988. They wanted to wait to see the outcome of the appeal of the Massachusetts law. It has gone through two appeals and has been upheld in two courts. Incidentally, the AMA was on the case on an amicus basis, as we get into a lot of cases. It was appealed in the Supreme Court and, as you know, they refused to hear it. It's on the books for good. All these other states, I expect, will look at mandatory assignment again and they are likely to pass it in their states if we don't do something to head it off.

What can we do to head it off? There are very specific things that we can do. The medical society in the state of Wisconsin was the first one to set up specific arrangements with senior citizens. They are working through their state government which has a division dealing with senior citizen issues. These people are anxious to do things for senior citizens. In fact, what is done is to invite low income beneficiaries to appear before a committee which evaluates them and their income. If they are at the specified low income level, the committee will give them a card certifying them as such and the medical society will, in turn, list physicians who agree to accept Medicare for these low income beneficiaries. Not for everybody, just for the low income.

Now you really don't have much to lose if you agree to do this. The low income people simply aren't capable of responding to balance billing anyway. They are still responsible for their 20% and you cannot discount it on a routine basis. If you do, you are reducing fees, and your profile rating will go down. But this is the kind of thing that needs to be done and a number of states are doing it. Minnesota, Wisconsin, Ohio, Washington State, and several others to name a few.

I would urge you to get such a program going because if you don't, I feel sure that if you haven't had mandatory assignment, you will, because it is a good political idea. This needs to be done very badly.

Peer Review

I usually talk about professional liability at this point but I've been told that peer review is a very major issue here. If you are interested in that I happened to have given the testimony of the AMA before Senator Durenberger's Subcommittee on Health when the Republicans controlled the Senate. He wrote the peer review law which replaced the PSRO.

The AMA stated in effect that “we don’t like your law very much as you have written it as there are a lot of weaknesses in it.” The AMA’s point of view is that the law has the same weaknesses as the PSRO law. It really doesn’t give the physician due process and the physician isn’t guaranteed the right to face the reviewer who says “This man practices bad medicine.” He is not advised that he has the right to have his attorney appear with him at the sanction process and to question witnesses and to bring witnesses to support him and to introduce more evidence and to be given a copy of all the deliberations of the state sanctioning committee.

All these things were pointed out in Senator Durenberger’s peer review law and in due time the first place it surfaced was in Richmond where a Dr. Oster was charged with improper medical care. He was a pretty well-known and highly-respected physician. He didn’t think he had provided bad care. Sanction was recommended and he sought relief by injunction. He went before a federal judge, who went through all the records and said he didn’t see any due process and thereby granted an injunction. So the sanctioning process came to a screeching halt for Dr. Oster.

The suit started to go forward and the AMA got into that one on an amicus basis, too. There was another one that moved even faster in northern Virginia. Mr. Kucero, the secretary, and the others up there in Washington sought legal advice and they were apparently told that they didn’t have a leg to stand on; that these physicians were not getting due process and a compromise was in order. Indeed, they agreed to change things.

We went through the suit, as did the plaintiff, without prejudice. The results were negotiations and we talked to Dr. Roper and his representatives at regular intervals. They did make significant changes that alleviated some of those problems.

Professional Liability

I know you have a big agenda but I hate to leave without saying a word about professional liability. All of you know the problem and I’ll just cover it lightly to let you know a little about how much it really costs.

There are some 560,000 physicians in the United States and the average annual premium across the country is \$12,500. Not all of the 560,000 physicians are in patient care; some are in administration. Not all of them are carrying insurance but let’s take a round, conservative figure like a half a million and multiply it by \$12,000, dropping the \$500. You’ll get \$6 billion a year that doctors are paying for premiums.

The hospitals are in this act, too. Figures from the American Hospital Association say that hospitals pay \$20 per bed per day. Isn’t that a frightening sum? The hospitals are paying \$20 a day for everybody who is lying in a hospital bed as well as the hospital beds that are empty at

the time. Some of them self-insure but the expense is still there. If they get sued, they’ll have to pay the money out.

There are 7,000 hospitals in the United States and the mean bed size is 100. If you took averages, it would be higher, but 100 is a nice, round figure to work with. So, multiply 7,000 by 100 by \$20 by 365 days a year and you’ll come to another \$5 billion dollars.

There’s defensive medicine and there is \$60 billion worth of laboratory work in the United States every year. Twenty percent of that is calculated to be for defensive medicine. That’s another 20% of \$60 billion is \$12 billion dollars. Now you’re looking at \$23 billion dollars. This reminds me of the late Senator Dirksen who said, “A billion here, a billion there, and pretty soon you’re talking about real money.”

You have gathered by now that I happen to like mathematics. Divide the \$23 billion by our population of 240 or 250 million people and you come to the figure of \$94 a year for every man, woman, and child in the United States to support this activity. Twenty-five cents out of a dollar gets down to the injured party. You just wonder how long the public is going to be willing to support this most inefficient insurance activity that anybody could ever design.

That’s pretty bad stuff, isn’t it? I hate to do it to you but I’m going to make it worse. St. Paul Insurance Company is the biggest company writing professional liability insurance and they project that for the next five years premiums across the United States will increase 30% a year. There is a “Rule of 72” which bankers use to calculate compound interest. It says you divide the rate of increase, in this case 30%, into the figure of 72 and you get doubling time in years. Thirty won’t go evenly, 29 would work better, but let’s say two and a half times. That means these premiums can be expected to double in two and a half years and quadruple in five.

Obstetric premiums average across the country about \$40,000. They are looking at \$160,000. Those poor folks in Florida, who are already paying \$200,000, are looking at a three-quarters of a million dollars a year.

Every time I talk about this I try to stress one thing. We don’t pay this. We write the check but we have to get the money from somewhere and we can’t print it like the federal government does; I often wish that they couldn’t. We have to get it from our patients. That’s the only place we can get it. That kind of money is built into every fee we charge a patient for any service we provide. It is built into every health insurance premium that anybody buys. This is business, man, because they buy over a \$100 billion of health insurance just for their employees.

So I think you just have to conclude very easily that in five years there are a lot of services that aren’t going to be there. How can OB’s be providing in south Florida and be expected to mobilize three-quarters of a million dollars. He just can’t do it. And when you can’t get

money from the patients, you go out of business and the service is no longer there.

What has to be done? The AMA and the specialty societies have been working on a program with the help of a Chicago law firm and others. They have worked out a plan which we hope to see put into effect. It won't come easily but it will convert the whole thing out of the

courts and put in under an administrative system.

Time doesn't allow me to detail how it will work, but it will be roughly like the workman's compensation system. There are two or three states which are in pretty dire straits that are expressing a lot of interest in it. We hope to see this thing come into effect.

Thank you very much. I've enjoyed talking to you.

Final Session House of Delegates

Speaker of the House Amail Chudy called the House of Delegates to order at 11:00 a.m., on Sunday, April 24, 1988. He asked that J. Larry Lawson, Chairman of the Council of the Arkansas Medical Society, give the invocation.

Voting members of the House who registered for the final session were: Drs. Robert Baker, Baxter; Carlton L. Chambers, III, Boone, Joe H. Wharton, Bradley; Danny Berry, Chicot; Thomas L. Eans, Cleburne, Scott McMahan, Columbia; Joe H. Stallings, Jr. and Don B. Vollman, Jr., Craighead-Poinsett; Thomas Gray, Crittenden; J. J. Magie, Faulkner; Lee Atherton, James Gardner, Brenda Powell, and Eugene Shelby, Garland; Richard Martin, Greene-Clay; Jim McKenzie, Hempstead; C. Randolph Ellis, Hot Spring; Anna Ridling and Gary Frigon, Jefferson; Ralph F. Joseph, Lawrence, Duong Ly, Lee; Robert Dalby, Little River; Eldon Fairley, Mississippi; Frank Lawrence, Pope; Glen Baker, Warren Boop, Gilbert Dean, James Hagler, David Hall, Fred O. Henker, III, Marvin Leibovich, James McDonald, J. Mayne Parker, John Pike, Michael Roberson, Charles Rodgers, Robert Shannon, and Frank Sipes, Pulaski; Marvin Kirk, Saline; William Schemel and Jerry Stewart, Sebastian; Ralph M. Bard, St. Francis; Michael Moody, Tri-County; Raymond Bowman and Willis Stevens, Jr., Union; John A. Hall, Van Buren; Gareth Eck, Anthony Hui, and David Rogers, Washington; and Daniel S. Davidson, White. Councilors: J. Larry Lawson, Merrill J. Osborne, John E. Bell, Jim E. Lytle, Hoy B. Speer, Jr., Paul A. Wallick, Lloyd G. Langston, Cal R. Sanders, James D. Armstrong, Ronald J. Bracken, William Jones, Harold Purdy, Charles Logan, Paul Cornell, and Morton

Wilson. President, John Hestir; Secretary, James R. Weber; Treasurer, James M. Kolb, Jr.; Speaker of the House, Amail Chudy; and Vice Speaker of the House, Sybil Hart. Past Presidents: A. E. Andrews, Jr., John P. Burge, Asa A. Crow, Ross E. Fowler, W. Payton Kolb, Ben N. Saltzman, Charles F. Wilkins, Jr., and T. E. Townsend.

Speaker Chudy recognized the Nominating Committee Chairman, Charles Logan, and asked him to come forward and present the Committee's slate of officers.

Dr. Logan read the following nominations:

President-elect: James R. Weber, Jacksonville and Charles F. Wilkins, Jr., Russellville

First Vice President: Glen F. Baker, Little Rock

Second Vice President: H. Aubry Talley, El Dorado

Third Vice President: George V. Roberson, Jr., Pine Bluff

Treasurer: James M. Kolb, Jr., Russellville

Secretary: Charles H. Rodgers, Little Rock

Speaker of the House: Sybil Hart, Blytheville

Vice Speaker of the House: James L. Gardner, Hot Springs

Councilors:

District 1: Merrill J. Osborne, Blytheville

District 2: John E. Bell, Searcy

District 3: L. J. B. Bell, Helena

District 4: Paul A. Wallick, Monticello

District 5: Cal R. Sanders, Camden

District 6: James D. Armstrong, Ashdown

District 7: Ronald J. Bracken, Hot Springs

District 8: William N. Jones, Little Rock

David Barclay, Little Rock

Harold Purdy, Little Rock

District 9: Robert H. Langston, Harrison

District 10: Morton C. Wilson, Fort Smith

Gerald A. Stolz, Russellville

Delegates to the American Medical Association:

Joe Verser, Harrisburg

A. E. Andrews, Texarkana

Alternate Delegates to the American Medical Association:

Jack Burge, Lake Village

George W. Warren, Smackover

Dr. Charles Wilkins asked to be recognized and to have his name removed from the slate of officers. James Weber of Jacksonville was elected President-elect by acclamation.

Dr. Weber was escorted to the podium by Drs. James Kolb and John Burge and gave the following address:

"As I look around this room I see a group of men and women for whom I have the greatest respect and greatest regards. To be nominated and be elected to a position of leadership by you, my colleagues, is indeed a great personal honor to me. I have learned, as you have learned, that every day brings many new challenges and opportunities to us who are privileged under our laws of this country to practice medicine and render one of the highest privileges to our brothers and fellow men. It is humbling for me to be elected to serve with those who are currently your leaders, Dr. Jouett, and now Dr. Hestir, and those distinguished presidents of this Society of the years gone by. I promise to you that I will serve you, I will always emphasize the basics, that is, our basic challenge to bring the cutting edge of modern medical knowledge and technology to our patients in a personal and compassionate way regardless of their ability to pay for our services. I pledge to you that I will spend the time and the energy to do that job to the best of my ability and I thank you for the honor."

Nominations for other positions as proposed by the Nominating Committee were also elected by acclamation.

Speaker Chudy recognized John Bell from Searcy. Dr. Bell announced that in September the American College of Radiology will award its Gold Medal to Dr. Joe Calhoun of Little Rock. Dr. Calhoun has been instrumental in insuring that radiology remains in the realm of clinical medicine rather than a hospital-based service and that radiologists should relate intimately with referring physicians and patients. This award is a distinct honor for Dr. Calhoun and the state of Arkansas.

Dr. Chudy addressed the House for his last time as Speaker. (See page 18.)

Speaker Chudy then turned the gavel over to Sybil Hart, the new Speaker of the House of Delegates. Speaker Hart asked President John Hestir to come to the podium.

Dr. Hestir presented Dr. Chudy with a plaque expressing the appreciation of the Society for his nineteen years of dedicated work as Speaker of the House and as an active member of the Arkansas Medical Society.

Dr. Hart recognized Dr. W. Ray Jouett, Immediate Past President of the Arkansas Medical Society. Dr. Jouett's address is as follows:

Immediate Past President's Address

W. Ray Jouett, M.D.

"As I expressed to you a year ago, I still express to you today, that it was and has been a great honor to be chosen as your State President and to represent you at the state as well as the national level. I have had the privilege to attend the AMA meeting in Chicago and have also been very fortunate to have been invited to visit various parts of the state. I have criss-crossed the state over the past year visiting many different county medical societies.

One of the greatest problems that we have in medicine, and it is not confined to Arkansas, is that of apathy on the part of the physician. I would hasten to tell you that, in my opinion, this particular malady is not as rampant today in our state as it was even five years ago. It is evident from traveling across the state that the physician of today is very much concerned about what is going on in his medical community and is, likewise, very concerned about what is transpiring at the national level and finding all of the political changes difficult to comprehend, and trying to remain current with the medical literature.

Each of the medical communities that I have visited within the state have all had different interests, difficult concerns, and some particular problem with their county, but the one abiding concern that has come to me from every aspect of the state, and to my knowledge from every group that I have met with, has been the one resounding question of "What is the Arkansas Medical Society going to do about the Arkansas Foundation?" That is also a question that has been addressed to me by telephone from about the state, and it is also a question that comes repeatedly from the state office.

The answer to that, of course, is very simple. The Arkansas Medical Society is not in the position to do anything concerning the Arkansas Foundation, but the leadership of the Arkansas Medical Society is very concerned about the growing problem that is becoming evident in the state of Arkansas in the medical community with the Arkansas Foundation for Medical Care.

I have been informed that a directive comes from Washington that the Foundation of various states will be given a percentage of physicians who will be reviewed and the number that I hear with frequency is presently 16%. I have talked to a number of people about this arbitrary figure and I have not been able to establish that as a point of truth. To me, it would seem reprehensible that

Farewell Address Speaker of the House of Delegates Amail Chudy, M.D.

And now it is gone, the door of yesterday is history and it is closed. I took a little time to place down some of my thoughts and I want to share them with you.

*To you whom I have offended,
I beg your forgiveness.
To you whom I have hurt by omission and/or
commission,
I am sorry.
To you who have been my teachers,
I am grateful.
To you who may have been my students,
I thank you for your time and concern.
To you who have served and given your time,
I am deeply appreciative.
To you who have so diligently fought for our cause,
I stand ready as a reserve for battle.
To you who are on the bench in training,
Take off your warmup suit and join us,
To you my cheers.
To the staff, I am completely lost for words.
To the Council, you are in good hands; Sybil will be
at your side.
To the deceased, the church triumphant,
I beg your constant support and intercession.
To the "unborn" doctors,*

*I pray for your maturity to become the best doctors ever.
To the patients, do not become restless;
Technology will not upset the personal one-on-one
relationship.
To my clinic associates, I appreciate your coverage and
the weekend shuffles.
To my family - To Ann, forever grateful for the nudges
to get me off dead-center and for the uppers when I was
down.
To Liebe and Anelia - sorry I took up so much of your
private time; please may I now try to make it up to all.
Thanks to Eddy.
To you sweet William, I promise love and play; love
and play.
I thank you and look forward to rest on the Sabbath -
true rest so that I may start the new work week, whatever
it may be, afresh.
Yesterday is history and the door is closed,
I look forward to the future.
I ask your prayers that I may become the man I thought
I was.
God love you all, I do.*



there would be any number at all that would be looked at just because some bureaucrat feels that a certain percentage of physicians should be reviewed.

The thing that concerned me most about the Foundation was the fact that this was a complaint that originated from each part of the state that I visited, and I believed that this state is composed of as fine physicians as you are going to find in any state. I do not believe that there should be such a display of anguish from the physician concerning the reviewing by this organization unless there is a problem with the Foundation. We are all aware of the fact there will be some, in any organization, who will abuse the system and that some will not practice good medicine, but the percentage is very small, probably 1% or less. We have been informed by the Foundation that six physicians in this state have been sanctioned for whatever reason. That does not seem out of proportion for the number of physicians within our state. Interesting statistics, which I have not been privileged to see, would be what percentage of physicians are reviewed or touched in some manner by the reviewing board in this state. I dare say that you will find that the number is excessively high, and very likely even exceeds the 16% figure which may or may not have some credibility.

A response that I have recommended to physicians across the state concerning denial is something that I have done myself. As you know, the denial can be for any number of reasons, anything from unnecessary admission to premature discharge and, as you know, that can also happen to the same patient and any other number of what would be listed as inappropriate type of care. I have written the patient explaining to them that the Arkansas Foundation for Medical Care has deemed it not necessary for their admission to the hospital or that they were inappropriately cared for while they were in the hospital. It is my recommendation to them that they should write both our senators and their congressman and then I list the address of the appropriate representatives and the two senators. I have been amazed at the number of people reported to have responded and have indeed written to their congressman concerning this problem.

This is the problem that will have to be changed at the national level. The only way it is going to be changed is through the grassroots endeavor. We will not be able to change it as physicians because of the connotation of a special interest group.

Another complaint that has emanated from the state has been about the members of the Board of the Arkansas Foundation and the fact that there are several members of the Board who seemingly have taken it upon themselves to become dispensers of justice in less than a royal manner. It seems that they have decided to remove the bad physician and to save medicine in the state. Certainly I have no knowledge that this is so, but this is information that is repeatedly transferred to me.

The approach to such a person on the Board is removal. They are subject to appointment to the Board and they can also be removed by elections. It would seem prudent that every person who is a member of the Arkansas Foundation for Medical Care would appear at the next board meeting and if there is a member of the Board who is not acting in the best interest of medicine that he should be removed from the Board by election. The next meeting of the Arkansas Foundation is in May of this year.

In conclusion, there are two points I would like to discuss with you briefly. One is that we develop an office of archives for this Society. There is tremendous amount of medical history that can still be obtained in the oral form which needs to be gathered from very capable physicians who are no longer practicing and can be stored in a repository at the State office. There is a lot of memorabilia that is available across the state that probably could be collected and housed in the office of archives. Hopefully, some will pick this project and will move forward with it.

The other point that I would like to bring to you in concerns the membership of the Arkansas Medical Society. One of the disappointing aspects of the Arkansas Medical Society is the poor representation we have of physicians who are members of the Society. One does not have to point out that the recipients of whatever is accomplished in this Society is the non-member as well as the active, hard-working member. Obviously, we are always going to have a situation in which we are dealing with people who will continually take, but will never give.

I would like to see a regulation passed by the Arkansas State Medical Board or some law from the legislative process, whichever is correct and appropriate, that would require each person who has a license to practice medicine in the state of Arkansas must be a member of the Arkansas Medical Society. The advantages of this particular situation would be enormous. We must continue to broaden our base of operation and at the same time maintain our credibility.

It has been a great privilege and an outstanding honor to have been your President over the past year. I encourage your support for the new president, Dr. John Hestir.

Thank you."

Speaker Hart asked that Charles Logan, Chairman of Reference Committee One, come to the podium. The report of Reference Committee One was presented to the House.

REFERENCE COMMITTEE NUMBER ONE

Charles Logan, M.D., Chairman

Mr. Speaker and members of the House of Delegates: Your Reference Committee Number One was composed of Drs. Charles Logan, Chairman, Little Rock; George

V. Roberson, Jr., Pine Bluff; Kelsy Caplinger, III, Little Rock; Paul A. Wallick, Monticello; and Kyle McAllister, Little Rock, Medical School Observer.

Your Reference Committee gave full and careful consideration to the items referred to it and makes the following report:

1. Resolution from Pulaski County Medical Society concerning seatbelts. A number of people spoke before the Reference Committee and were in general agreement that the Pulaski County Resolution be adopted.

Mr. Speaker, the Reference Committee recommends adoption of this resolution.

2. Committee on AIDS, chaired by Dr. William N. Jones. Dr. Jones brought us up-to-date statistically on the AIDS report. He also brought to the attention of the Reference Committee that there now exists a state law that requires the Arkansas Department of Health and the UAMS to carry out an AIDS education program. The following items are regulations:

1. A regulation that allows emergency medical personnel a mechanism whereby they may be informed of the HIV status of the injured person.
2. A regulation that requires the reporting of HIV positive persons by name and address to the Arkansas Department of Health so they can be counseled and their sexual and drug contacts traced, counseled and offered testing.
3. A regulation that will allow the Arkansas Department of Health to notify the prosecuting attorney to take appropriate action when a known person with AIDS continues to practice risk behavior.
4. A regulation for tagging of bodies with the term infectious disease, although the word AIDS or HIV positive is not included on the tag.

Your Reference Committee recommends acceptance of the AIDS report for information and recommends the printing of the existing regulations concerning AIDS in the *Journal of the Arkansas Medical Society*.

Mr. Speaker, your Reference Committee recommends accepting this report of the Committee on AIDS as printed and amended.

In addition, Mr. Speaker, the Committee would like to point out and commend the close working relationship and mutually supportive activities of the Committee on AIDS and the Arkansas Department of Health.

3. The Committee on Aging, chaired by Dr. Joseph Norton. Since there was no request from the Committee on Aging, the committee did not meet

during 1987. No action was taken by the Reference Committee.

4. Report of the Committee on Continuing Medical Education, chaired by Dr. John M. Hestir. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.
5. Report of the Professional Relations Committee for the Fifth Councilor District, chaired by Dr. Cal Sanders. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.
6. Report of the Impaired Physicians Committee, chaired by Dr. Joe Martindale. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.
7. Report of the Arkansas Political Action Committee, chaired by Dr. John Crenshaw. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.
8. Report of the Committee on Medicine and Religion, chaired by Dr. Fred O. Henker. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.
9. Report of the Committee on Maternal and Child Welfare, chaired by Dr. Robert H. Fiser. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.
10. Report of the Committee on Public Health, chaired by Dr. Don Howard. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.
11. Report of the AMS Medical Student Section, Lawrence Meyer, President. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.

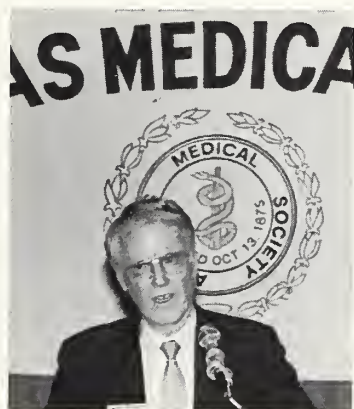
SPEAKERS



A large group of Society and Auxiliary members assembled to hear the speakers at the Shuffield Lecture.



Mr. Lib Carlisle and Mr. Ed Bethune were the featured speakers for the Shuffield Lecture/Luncheon.



William Hotchkiss, AMA President, addressed the first House of Delegates.



G. Douglas Talbott from Georgia, spoke to the Auxiliary and participated in the general scientific session. His topic was alcohol and drug rehabilitation.



The Socioeconomic Seminar, "The Future of Medicine as a Career" featured a panel discussion. Jack Blackshear was the moderator.



R. Neal Boswell, a colonel at Lackland Air Force Base in Texas, spoke at the Joint Specialty Luncheon. His topic was "AIDS 1988."

12. Report of the Arkansas Department of Health, Dr. M. Joycelyn Elders, Director. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.

13. Report of the University of Arkansas College of Medicine, Dr. I. Dodd Wilson, Dean. All students of the Class of 1987 passed both parts of the FLEX Examination. The Reference Committee commends the students and the faculty which made Arkansas the only state having 100% pass rate.

In the report, it states the "the clinical faculty will continue to develop new health care programs which add to the quality of life for all Arkansans." From this sprang a discussion of the off campus activities of the faculty and staff of the University of Arkansas for Medical Sciences.

Concern was expressed over increasing activities of staff and faculty in the private setting, outside of the campus. It was pointed out that this activity has been monitored by the Council of the Arkansas Medical Society, and a report to the Council has been received from Dr. Harry Ward, Chancellor.

The Reference Committee recommends acceptance of this report for information. The Committee recommends that the Council of the Arkansas Medical Society remain knowledgeable of the off campus activities of the faculty and staff and keep the membership informed.

Three supplemental reports were received and reviewed and printed copies were distributed. Copies of the supplemental report are submitted with our report.

14. Report of the Professional Relations Committee of the Eighth Council District, chaired by Dr. Charles Rodgers. The Reference Committee reviewed the report and recommends it be accepted as presented.

15. Medical Service Review Committee, chaired by Dr. Charles Rodgers. Mr. Speaker, your Reference Committee recommends acceptance of this report for information. We recommend that the Council address the request to explore the status of the physicians individual legal immunity in peer review and keep the membership informed.

16. Report of the Indigent Care Program, Dr. Asa Crow. The Indigent Care Committee asks support for an evaluation of the "Kentucky Indigent Care Program" to see if it might be implemented in the Arkansas setting.

A printed summary of the report was distributed and a lengthy discussion followed. There was general support for the concept.

Mr. Speaker, your Reference Committee recommends the Council of the Arkansas Medical Society continue the study of a system of indigent care.

Mr. Speaker, I move adoption of this report.

Mr. Speaker, this concludes the report of the Reference Committee Number One. I wish to thank those who appeared before the Committee, my fellow members of the Committee, and those members of the staff who assisted."

Speaker Hart thanked Dr. Logan and his committee for their work on the reference committee. Upon a motion from the floor, the House accepted the report of Reference Committee One as presented.

Speaker Hart called for the report of Reference Committee Two, James D. Armstrong, Chairman. The report of Reference Committee Two was presented to the House.

REFERENCE COMMITTEE NUMBER TWO

James D. Armstrong, M.D., Chairman

"Mr. Speaker and members of the House of Delegates: Your Reference Committee Two was composed of Drs. Robert F. Shannon, Little Rock; Milton Deneke, West Memphis; Earl B. Riddick, Jr., Fayetteville; Morton C. Wilson, Fort Smith; Steve Hathcock, Little Rock, Medical School Observer; and Matthew Garner, Little Rock, Medical School Alternate.

Your Reference Committee gave careful consideration to the following items and requests that each item be considered separately:

1. Budget Committee Report, chaired by Dr. Lloyd Langston. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.

2. Annual Session Committee, chaired by Dr. Glen Baker. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.

3. Report of the Council. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.

4. Report of the Executive Vice President, Mr. Ken LaMastus. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.
5. Committee on Insurance, chaired by Dr. Eugene F. Still, II. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.
6. Committee on Membership Benefits, chaired by Dr. John Hestir. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.
7. Report of the Trustees of the Pension Plan, chaired by Dr. Rhys A. Williams. The Reference Committee reviewed the report and recommends it be accepted for information.
8. Report of the Professional Relations Committee for the First Councilor District, chaired by Dr. Bascom P. Raney.
9. Report of the Professional Relations Committee for the Second Councilor District, chaired by Dr. Clarence W. Jackson. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.
10. Report of the Professional Relations Committee for the Third Councilor District, chaired by Dr. John M. Hestir. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.
11. Report of the Professional Relations Committee for the Fifth Councilor District, chaired by Dr. C. E. Tommey. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.
12. Report of the Professional Relations Committee for the Sixth Councilor District, chaired by Dr. F. E. Joyce. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.

13. Report of the Professional Relations Committee for the Tenth Councilor District, chaired by Dr. Samuel E. Landrum. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.
14. Medical Education Foundation for Arkansas, Dr. G. Martin Eisele, President. The Reference Committee reviewed the report and recommends it be accepted as printed in the March, 1988 issue of the *Journal of the Arkansas Medical Society*.
15. Arkansas State Medical Board, Dr. Joe Verser, Secretary. The Reference Committee reviewed the report and recommends it be accepted for information.

Mr. Speaker, this concludes the report of your Reference Committee Two. I wish to thank those who appeared before the Committee, members of the Committee, and those staff members who assisted us.

Mr. Speaker, I move the adoption of this report."

Speaker Hart asked Chairman of the Council, J. Larry Lawson to give the Report of the Council which met daily during the annual session. The report is as follows:

REPORT OF THE COUNCIL

J. Larry Lawson, M.D., Chairman

The Council met on Thursday, April 21, 1988, and conducted the following business.

1. Heard an address from Dr. William S. Hotchkiss, President of the American Medical Association. Dr. Hotchkiss spoke on the pending catastrophic health care issue.
2. The Council heard a report from Dr. Asa Crow on the Indigent Care Program of Kentucky.

The Council met on Friday, April 22, 1988, and conducted the following business:

1. Heard a report from Ken LaMastus concerning the budget as of March 1988.
2. Reviewed the Arkansas Medical Society Audit Report prepared by Ferguson, Cobb, and Associates for the year ending 1987.
3. Heard a report from Ken LaMastus on the current membership status of the Arkansas Medical Society.
4. Heard a report from Mike Mitchell, the AMS General Counsel, on the appeal of the Schaefer

lawsuit. Oral arguments will be presented to the Eighth Circuit Court of Appeals in St. Louis in May.

5. Council voted to approve the request of dues exemption for those members whose names have been submitted to the Society office.
6. The Council approved the nomination of Dr. Warren Murry as Ninth District Councilor. Dr. Murry will fill the unexpired term of Dr. Richard Pearson who has resigned.
7. Heard a report from Dr. James Weber on the Based Relative Value Study which will be completed in July of this year.
8. The Council voted to change the name of the Impaired Physicians Committee to Physicians' Health Committee.

The Council met on Saturday, April 23, 1988, and conducted the following business:

1. Mike Mitchell discussed the COBRA "Dumping Act" and the effect it has on physicians and hospitals dealing with emergency situations.
2. Dr. Mike Moody of Salem gave an update on the Arkansas Health Services Committee on which he serves.
3. Dr. Robert Nunnally of Camden discussed the problems now facing rural hospitals with regard to the DRGs compared to urban hospitals.
4. Ken LaMastus reported on the liability situations currently existing with physicians and hospitals in conducting "Health Fairs". The decision was made for the Society to arrange a meeting consisting of the Arkansas Medical Society, the Arkansas Hospital Association, and primary insurance companies to discuss and develop guidelines to follow when conducting Health Fairs.
5. James Weber reported on the "Committee of Office Laboratory Certification (COLA).

The Council met on Sunday, April 24, 1988, and the conducted the following business:

1. Passed a motion for Lynn Zeno, Director of Governmental Affairs, to present his slide presentation to the county societies and non-member physicians.
2. Approved appointments to the Medical Services Review Committee are as follows: William Burgess, Little Rock, representing anesthesiology; Sam McGuire, Forrest City, and Michael Moody, Salem, representing family physicians; Fred Turner, Mountain Home, representing internal medicine; Payton Kolb, Little Rock, representing psychiatry; John Jones, Little Rock, representing surgery; W. Ray Jouett, Little Rock, representing neuro-

surgery; and Charles Logan, Little Rock, representing urology.

3. Approved appointments to the Sub-committee of Sub-specialties of the Medical Services Review Committee are as follows: Leon Woods, Fort Smith, representing thoracic surgery; Thomas Smith, Little Rock, representing gastroenterology; James Beckman, Jr., Fayetteville, representing plastic surgery; John Schultz, Little Rock, representing pulmonary disorders; Kelsy J. Caplinger, Jr., representing pediatric allergy; Doyne Williams, Little Rock, representing nephrology; Robbie Atkinson, D.D.S., Pine Bluff representing oral surgery; and Eugene Shelby, Hot Springs, representing emergency physicians.
4. The Council voted to reappoint James Weber, Jacksonville; Asa Crow, Paragould; and Payton Kolb, Little Rock; as members of the Board of Trustees of the AMS State Legislative Fund.
5. The Council approved the following members of the Arkansas Medical Society Political Action Committee: John Crenshaw, Pine Bluff; Mrs. Herbert Taylor, Memphis; Roger Cagle, Paragould; Paul Meredith, Texarkana; John Giller, El Dorado; Daniel Davidson, Searcy; Robert Langston, Harrison; Joe H. Stallings, Jr., Jonesboro; Mrs. Deno Pappas, Hot Springs, Mrs. Kemal Kutait, Fort Smith; James Hagler, Little Rock; Payton Kolb, Little Rock, James Landers, Little Rock; Hoy B. Speer, Jr., Stuttgart; Mrs. Robert Gullett, Jr., Pine Bluff; Paul Will, Fort Smith; Charles Rodgers, Little Rock; Charles Fitzgerald, Little Rock; and James Kolb, Russellville.
6. No action was taken at this time on the appointment on the Medical Education Foundation for Arkansas position, which will be vacant in August, 1988.
7. The Council approved the following recommendations of the Chairman of the Council:
 - a. No appointment will be made to the Position Papers Committee to reduce the size of the Committee.
 - b. No nominations will be made to the Cost Effectiveness Committee (in effect, eliminating the committee).
8. Dr. Ronald Bracken reported on a request from Dr. John Schock asking for the AMS to endorse the new eye bank at the medical center.
9. Dr. Glen Baker asked the Council to recognize the AMS staff for the hard work they have done in working with the annual session.
10. Chairman Lawson announced the future convention dates as follows: 1989: April 26-30, Hot Springs; 1990: April 18-22, Little Rock; 1991, April 24-27, Hot Springs.

Upon a motion from the floor which was seconded, the report was received as information.

Speaker Hart read the following nominees for the Arkansas State Board of Health vacancies:

District #1: Don Vollman, Jonesboro; Merrill Osborne, Blytheville; and Sybil Hart, Blytheville.

District #5: Gail Ann McCrackin, Little Rock; James Maupin, Dardanelle; and Ben Saltzman, Little Rock.

The nominee from District #1 for the Arkansas State Medical Board is Asa Crow of Paragould.

Speaker Hart read the names of the following Nominating Committee members for 1988-89. Richard Martin, Paragould, District #1; Michael Moody, Salem, District #2; Robert Miller, Helena, District #3; Lee B. Forestiere, Pine Bluff, District #4; Raymond Bowman, El Dorado, District #5; James Armstrong, Ashdown, District #6; Brenda Powell, Hot Springs, District #7; Charles Logan, Little Rock, District #8; Robert Langston, Harrison, District #9; Frank Lawrence, Russellville, District #10. Dr. Charles Logan will serve as chairman.

There being no further business the House adjourned.

SUPPLEMENTAL REPORTS
REFERENCE COMMITTEE NUMBER ONE

Report of the Medical Services Review Committee
Charles H. Rodgers, Chairman

The Medical Services Review Committee is a committee of the Council of the Arkansas Medical Society and acts as an advisory committee to the Arkansas Blue Cross Blue Shield to assist in adjudicating claims of an unusual nature, either in services rendered or fees charged. The Committee meets on a regular monthly basis to review those claims and is composed of representatives from most of the specialties of the Arkansas Medical Society.

The Committee is designated as a peer review committee and acts in a fiduciary manner representing the best interest of the physicians and patients in our state. Every effort is made to give the physician due process, and every effort is made to come to an objective, good, fair decision based on the majority opinion of approximately 30 physicians representing all specialties of medicine.

The Committee has been historically and traditionally the premier peer review committee for the state and physicians are honored to serve on this Committee. Most of

these physicians state that they find a three-year term on this committee to be very enjoyable and educational. Most come away with a feeling of satisfaction that they have served their specialty, fellow physicians, and patients in an admirable manner.

The Committee asks that each specialty make every effort to present a physician's name from their organization who will wholeheartedly commit his time and energy to this vital committee of the Arkansas Medical Society.

Report of the Professional Relations Committee
Eighth Councilor District
Charles H. Rodgers, M.D., Chairman

The Professional Relations Committee for the Eighth Councilor District has received three complaints to date.

One case was a misunderstanding about fees and procedures; this case was adjudicated to the satisfaction of the patient, his company's health personnel director, and the physician.

The second case concerned a patient who was dissatisfied with her fee and was dismayed that her physician referred her to an attorney to help represent her in an automobile accident. The physician in question is no longer in active practice and no further action has been taken in this case to date.

The third case involved a patient who was dissatisfied with the surgical management of her case and this case is presently still being considered.

As Chairman of this Committee, I would like to request the Council, Reference Committee, and/or House of Delegates explore the status of the physician's individual legal immunity in peer review. We should develop a set of guidelines to help the peer review physician stay within the safety net of legal immunity for physicians involved in peer review. There appear to be laws providing immunity from civil action suits for the protection of those persons who are acting in public interest. However, Mike Mitchell, J.D., General Counsel to the Arkansas Medical Society, has indicated recently in the *Journal of the Arkansas Medical Society* that these laws should not be blindly relied upon for protection. He states that every effort should be made to act in a reasonable and prudent manner as immunity laws may not apply in cases where gross negligence or malice is proven. I believe it is important for the Medical Society to review these laws and disseminate information to physicians involved in all peer review related matters so that they do not jeopardize their own positions. Just as important is to protect the rights of peers that they are reviewing. Every effort must be made to maintain confidentiality for both patient and physician, and we must fight to protect the findings of peer review to make sure they are not subject to discovery and use in a court of law.

TAKING OFFICE



Prior to the Inaugural Banquet, a reception was held with the officers and thier wives greeting guests. From left to right are Mrs. and Dr. James Weber, Mrs. and Dr. J. Larry Lawson, Mrs. and Dr. John M. Hestir, and Mrs. and Dr. Ray Jouett.



Dr. Jouett made his final remarks as President of the Society while the past presidents look on.



Dr. John M. Hestir receives the gavel and the presidency of the Society from Dr. Jouett. The new president received a medallion in honor of his position. Dr. Jouett was given a memorial for his contributions as president for 1987-88.



Officers and Councilors of the Society for 1988-89 are James M. Kolb, John M. Hestir, Merrill Osborne, Harold Purdy, Glen Baker, Robert Langston, Charles Logan, Ronald Bracken, John Bell, Morton Wilson, Hoy Speer, Paul Cornell, William N. Jones, James Gardner, Gerald Stoltz, J. Larry Lawson, Sybil Hart, Jim Lytle, James Weber, Ray Jouett, Paul Wallick, Harold Langston, James Armstrong, George Roberson, Charles Rodgers, and Cal Sanders.

Executive Summary Kentucky Indigent Care Program As Presented to Reference Committee Number One

The program was set up so individuals who meet the guidelines of the program are referred to physicians who have volunteered to see that patient for one office visit for no charge. Subsequent visits if necessary are between the patient and the physician. It is up to the physician if there is a charge for those subsequent visits. If the physician cannot or will not see the patient for subsequent visits, or decides to make a charge, and the patient does not feel that he or she can pay, the patient can call a referral number and be referred to another physician who will receive him on the initial visit at no charge. Experience shows that in the vast majority of the cases, even if the patient is unable to pay, the physician continues to see them without charge.

The program was put into effect January 8th, 1985, by the Kentucky Medical Association's House of Delegates. A total number of 2,400 physicians have participated in the Kentucky's Physician Care. There are approximately 4,200 practicing physicians in Kentucky. Thus, more than half the entire active physicians population have participated.

The program is a blend of four groups. The Kentucky Care Access Foundation, which funds salaries of two full-time staff people who are housed in the KMA building. It pays the cost of a statewide toll free WATS line number for participants to call in on for referrals.

The Kentucky Cabinet for Human Resources certifies patients for eligibility. In their first appeal, they may be eligible for the program, and they are asked to go to their nearest county Resources Office to be certified. They are automatically screened for Medicaid and if they do not qualify, they are screened for this program. Guidelines are that the families or individuals do not have income exceeding a 100% of the federal poverty level and ineligible for any governmental medical programs. Once a client is certified, they are notified of their certification. The client may then call the toll free number and be referred to a primary care physician in their same zip code, or possibly in their same county.

The third group in this program is the Kentucky Hospital Association. It has developed what they call their "Fair Share Program" by which participating hospitals agree to take a fair share of indigent and Medicaid patients. Their fair share is based on a formula ratio of total income to charity on a statewide average. To date all but eight hospitals are participating, and six of these are Humana hospitals.

The KMA, the fourth member of the group, is taking the majority of the work in getting the indigent program set up and running. In addition to soliciting the physicians who will participate in the program, the KMA has provided in kind services of approximately \$50,000 a year.

Those services include space in the building, telephone equipment, computer space, equipment and programming, office supplies, staff supervision when necessary, and on some occasions additional staff services such as mailings.

The KMA and the Foundation have funded the program for six months of its operation.

The median gross of family income per month for all eligible families, which is reported on their application forms, is \$257.50 (\$3,090.00/per year). That figure divided by the statewide number per person per eligible family represents \$98.00 per person per month (\$1,176.00 per year).

Over one-third of the eligible families report no income, and 46% report less than \$201.00 per month. About 25% report family income between \$201.00-400.00 per month. Remember, even with these financial circumstances, these people were not eligible for Medicaid.

The mean number of persons per family was 2.62. One-third of all eligible families were one person households. Fifty-four percent of the families had two or fewer eligible members. Two-thirds of the eligible individuals had not completed high school. Fifty-two percent of the eligible population were female. Fifty-three percent were less than 25 years of age. The single largest category was females age 15-24 (11.5% of the total). The mean age of eligible persons was 25.7 years.

In the first 5.5 months of the program, 95% of those who applied (18,513 individuals) were accepted to the program (17,467 individuals). As of March, 1988, 56,273 individuals have been certified by the Health Care program since its inception.

Half of the eligible families reported having an illness two months prior to their application. Thirty percent reported that they had not sought or received care for their past illness, while 75% reported having been treated by a physician or clinic. An estimated 1,000 families reported that they had received health care through the program that they would not have received otherwise.

A bulk of services to this project have been by the primary care physicians. Initially, it was felt it would be best for the patients, to the extent possible, to be seen first by a primary care physician. This has worked out very well. The referral line was initially handled by a registered nurse. That person has left and been replaced by a L.P.N.

A problem in the program which has been major is the fact that prescriptions have been written, but patients do not have the money to have them filled. The Kentucky Pharmacists Association has been sympathetic to the program, but they are unable or not willing to be involved. The Pharmaceutical Manufacturers representa-

tives in the state have, in empathy, increased their sample products to participating physicians. However, not all medications needed are available in sample form, and all prescriptions are not available from pharmaceutical companies, such as various appliances like braces and so forth.

The second problem is obstetrics. The liability situation in Kentucky has pretty much forced many family physicians out of delivering babies. The result is a rising number of patients being sent to an obstetrician. Because of that and the stiff liability fees obstetricians are paying, their participation has been limited. However, many county health departments have prenatal programs, so most of the OB referrals have been made to them, and this for the most part has worked out fairly well.

Today, over 51,140 calls have been received over the hot line, and 23,123 referrals have been made to primary care physicians. It is estimated that each referral results in four visits per physician.

Excerpts from a Study Performed by University of Louisville, 1985

Analysis was based on 5.5 months observation, with data coming from five sources: application forms, on-line file of eligible people, on-line file of participating physicians, physician service reports and telephone survey on 296 families enrolled in the program.

Summary of Data

People Served

Eighteen thousand people and 7,500 families applied and were certified for the program. These people were under the age of 65 and more likely than not Kentuckians who live alone. Two-thirds had not completed high school and had an average income of \$280.00 per month, and averaged \$39 cash on hand or in the bank.

Persons enrolled in the program represent about 2.5% of Kentucky natives living in poverty. The program met a greater health care needs to western Kentucky than other parts.

About half of the enrolled families called the KMA for referrals. There was an average of 33 referrals for every 100 people in the program.

Participating Physicians

Half of the active practicing physicians in Kentucky volunteered for the program. Participation was highest in the northeast and lowest in the Midwest. There was an average of 2.8 referrals per each physician in the program. Persons in southwest and Midwest Kentucky had three times the average of referrals. They had a larger need for health care and lower physician participation. Half of the participating physicians had no direct referrals. Referrals were most frequently made to primary

care physicians, with family practitioners averaging 7.3 referrals.

Program Care

People enrolled in the program averaged about three ambulatory visits in that 5.5 months, higher than total population in the south region of the United States and higher than the AFDC-related Medicaid recipients in some counties. Only about one visit in seven was reported as due to program referral. There were about 6,000 referrals made through the program resulting in about 7,000 visits.

Care without charge was not limited to the program: 43% of the visits not due to referral were free to the patient. Half of the families had been turned down by Medicaid during the two years prior to the program, and during that time, one-fourth had been refused medical care because they could not afford it. However, three-fourths had gone to a physician during that time.

Other Important Statistical Data

About one person in five in Kentucky were estimated to be in poverty during the time of the study. The KMA's study represents about 2.5% of people in poverty. Medicaid covers about half of the population in poverty.

In Arkansas, approximately 23% of the people are in poverty. Arkansas Medicaid covers 32% of the population in poverty, leaving approximately 360,000 people below poverty without medical coverage.

The percentage covered in the Kentucky plan is 2.5%. If this were to be applied to Arkansas, it would equal about 13,511.

FEDERAL GUIDELINES FOR POVERTY 1988

<i>Family Size</i>	<i>Family Annual Income</i>	<i>Family Monthly Income Individuals</i>
1	5,770.00	480.00
2	7,730.00	644.00
3	9,690.00	807.50
4	11,650.00	970.00
5	13,010.00	1,084.00
6	15,570.00	1,297.50
7	17,530.00	1,460.80
8	19,490.00	1,624.16

The Arkansas Academy of Ophthalmology works with their national association to provide eye services to elderly citizens. The program utilizes a nationwide WATS number for those senior citizens in need. The program has resulted in 1,855 phone calls from Arkansas and 1,230 eligible callers have been referred to ophthalmologists. The program started in January, 1985.

OTHER ACTIVITIES

Shuffield Lecture/Luncheon

The Shuffield Lecture/Luncheon is presented annually in memory of Dr. Elvin Shuffield who served as secretary of the medical society and chairman of the Legislative Committee for twenty years.

This year's program, "Reflections on the 1988 Presidential Elections", featured Mr. Lib Carlisle, Chairman of the Democratic Party of Arkansas, and former U. S. Congressman Ed Bethune, Chairman of the Republican Party of Arkansas.

The speakers discussed the strategies and strengths that their respective candidates hope to capitalize on in the race for the White House. Both speakers urged physicians to take a more active role in the political process.

Special guests attending the luncheon were Mrs. Elvin Shuffield and her daughters, Carolyn Wright and Linda Shuffield.

Prescription for Political Success

Emphasizing the impact that government has on the practice of medicine, Lynn Zeno, AMS Director of Governmental Affairs, displayed a multiple slide show presentation on the role physicians must play in the political process.

All aspects of political involvement were covered including the importance of PAC contributions and methods of effective communication with legislators. The key message of the presentation was stressing to physicians that "politics" is not a dirty word but merely the art of governing themselves.

State Representative Bobby Hogue of Jonesboro, a member of the Public Health Committee, concluded the presentation with the statement, "In regard to the future of medicine, this was probably the most important session of the entire annual convention."

Pros and Cons of the PRO

The opening session featured one of the best attended programs of the annual session. The panel presentation featuring officers of the Arkansas Foundation for Medical Care was moderated by Mr. Lynn Zeno, AMS Director of Governmental Affairs.

Participating on the panel were Gene Hartsell, President and CEO; George V. Roberson, M.D., Chairman of the Board; James D. Busby, M.D., Executive Vice President of Medical Affairs; and Russell Brasher, Ph.D., Senior Vice President for Corporate Planning and Quality Control.

Following introductory remarks the panel responded to physicians' questions which had been compiled by the AMS office. Questions from the floor were also answered.

Panel members received a true reading of the concerns of Arkansas physicians and physician attendees left with a better understanding of the role of the AFMC.

SHUFFIELD AWARD

Thomas K. Williams, Ed.D., of Fayetteville, was presented the 1988 Shuffield Award by Dr. W. Ray Jouett during the Inaugural Banquet, April 23rd. Dr. Williams was nominated by Dr. and Mrs. James McDonald of Fayetteville.



Thomas E. Williams, Ed.D., accepts the Shuffield Award from Dr. Jouett while Dr. Hestir looks on.



"Physician" AMS staff members in scrubs greeted members during the session.



It was "standing room only" for those who took the bus ride to Murry's Dinner Theatre.



The Blue Cross Blue Shield sponsored reception was well attended and, as is always the case, the food was delicious.

Exhibits and Entertainment



There was plenty to see and do in the exhibit area with scientific and technical displays. Several breaks and lunches were also held in this area.



An appreciative group enjoyed the meal and entertainment at Murry's. The show for the evening was "Not Not Darling," a comedy.

The Shuffield Award is given each year to a lay person who has made significant contributions to their community and to the people of Arkansas in the area of Health Care. The award is named in honor of Doctors Joe and Elvin Shuffield for their many years of service to the Arkansas health professions.

Dr. Williams is a health education and exercise physiology teacher at Fayetteville High School. In 1984, he helped organize a Students Against Drunk Driving (S.A.D.D.) chapter at Fayetteville. He has implemented a progressive health education program based on a multi-dimensional approach to wellness and positive behavioral

change. This program was awarded the Governor's Award for Health Education and Promotion (1985), and selected as one of the top 20 health education programs for public schools in the United States. The program was also selected as an award winner for an Alcohol-Drug Prevention Program in 1986 by the United States Department of Human Services.

In 1987, Dr. Williams was selected as the Southern District Health Educator of the Year by the American Alliance of Health Education, Physical Education, Recreation and Dance as well as the National Institute of Health's Centennial Teacher for Arkansas.



Presidents' Luncheon

The Past Presidents Luncheon was held Thursday, April 21st in the Josephine II Restaurant of the Excelsior Hotel. Attending the luncheon were: (seated, left to right) Drs. Asa Crow, Charles Wilkins, Guest William Hotchkiss, AMA President; Robert Watson, Ross Fowler. Standing, left to right: C. C. Long, John Burge, A. S. Koenig, W. Payton Kolb, Stanley Applegate, Purcell Smith, Ben Saltzman, H. W. Thomas, A. E. Andrews, and C. R. Ellis.



Fifty Year Club Luncheon

The Society hosted a luncheon for members of the Fifty Year Club on Saturday, April 23rd, at 12:00 noon at the Capital Hotel. The Fifty Year Club President is Gilbert Dean of Little Rock. Physicians attending the luncheon were (first row, left to right): Thomas E. Williams, James W. Branch, Sr.; Oba White. Second row, left to right: Gardner Landers, John Sneed, John E. Greutter, Edgar Easley, Henry G. Hollenberg. Third row, left to right: Kenneth Seifert, William B. Harrell, Vida H. Gordon, John Dorman, Milton C. John, Jr.; Robert Watson. Fourth row, left to right: Karlton Kemp, Howard Schwander, H. V. Kirby, John W. Jones, John Guenther, Max Baldrige, Gilbert Dean, Jim McKenzie and James Huskins.

Prayer Breakfast and Symposium

The Committee on Medicine and Religion sponsored a Prayer Breakfast on Sunday morning, April 24th, at 8:00 a.m., in the Ballroom of the Excelsior Hotel.

An informative panel discussion was held by Maurice Hurley, Ph.D., Moderator, Sister Margaret Vincent Blandford, Chairperson of St. Vincent Infirmary Medical Center, and George Ackerman, M.D.

Immediately following the breakfast Dr. Russell Steele presented a trumpet fanfare, "Airs for the Trumpet based on Psalms" composed by George P. Teleman. Dr. Eugene Taylor played a piano solo entitled "Prelude in C" by Bach and a liturgical dance was performed by Lorene McAfee Patterson and Jean Morris. A harp solo by Mrs. Frances Bowman entitled, "Reverie" by Grand Jany and vocal solo by Dr. Jack Blackshear, "How Great Thou Art" rounded out the program. Dr. Randolph Ellis led the attendees in a closing song prayer, "God Be With You".

Memorial Service

The joint Arkansas Medical Society/Auxiliary Memorial Service was held at Sunday, April 24th, in the Excelsior Hotel. The program included readings from the Scriptures by Dr. Ray Jouett and Mrs. James Gardner. Dr. Doug Smith read a poem which was written by his grandfather and hung on the wall of his father, John McCullough Smith, for many years.

The Lord's Prayer was given by Dr. J. Larry Lawson and Dr. John Hestir read the Litany and the names of the Society members who have died during the last year. Names of the deceased members of the Auxiliary was read by Mrs. Ray Jouett. Dr. Jack Blackshear sang "Jesu Joy of Man's Desiring" by J. S. Bach while Mrs. Frances Bowman accompanied him on the harp. The Society members honored during this service were Matthias Anthony Baltz, Pocahontas; Charles G. Clark, Arkadelphia; Charles S. Cunningham, Poteau, Oklahoma; Lawrence E. Edwards, Niceville, Florida; John Campbell Gilliland, Fort Smith; Richard F. Graham, Hot Springs; Glenn G. Hairston, Prescott; M. Haymond Harris, Newport; Richard A. Hinkle, Quitman; William J. Jones, Glenwood; Kay M. Kreth, Little Rock; Herbert Lanford, West Memphis; Robert F. McCrary, Sr., Hot Springs; Earle D. McKelvey, Clarksville; George T. McPhail, Little Rock; Frank E. Morgan, North Little Rock; Harold H. Short, Texarkana; Walter Shriner, Springfield, Illinois; John McCollough Smith, Little Rock; Samuel B. Thompson, Sr., Little Rock; and Joe Bill Wilson, Harrison.

The Auxiliary members honored were Mrs. Thomas Lester Adair, Bald Knob; Mrs. Thomas DeClerk, Pocahontas; Mrs. Tom L. Dunn, Hampton; Mrs. Frank G. Edmiston, Maumelle; Mrs. J. B. Elders, Walnut Ridge; Mrs. James R. Knapp, Rogers; Mrs. Clyde A. Lawlah, Pine Bluff; Mrs. James G. Martindale, Hope; Mrs. Max F. McAllister, Houston, Texas; Mrs. Ralph Edwin McLochlin, Little Rock; Mrs. E. W. Pillstrom, Ozark; and Mrs. Leola Shukers, Little Rock.

EXHIBITORS

The Arkansas Medical Society wishes to thank the following exhibitors for their help in making the 1988 Annual Session a success.

Scientific Exhibits

"A Community Hospital Cancer Registry", sponsored by St. Vincent Infirmary Cancer Center, Carlos Araoz, M.D., and Walter B. Clarcy, Ph.D., Little Rock

"An Office Microscope Video System", sponsored by The Ear & Nose-Throat Clinic, P. A., James J. Pappas, M.D., and Sharon S. Graham, M.A., Little Rock

"Arkansas High Risk Pregnancy Program", sponsored by the Arkansas High Risk Pregnancy Program of the Department of Obstetrics/Gynecology, University of Arkansas for Medical Sciences, Jana Atterbury, R.N., Cindy Crone, R.N., Glenna Roberts, R.N., Melinda Snider, R.N., and Julia West, R.N., Little Rock

"Current Diagnostic Imaging Capabilities in Otolaryngology", sponsored by The Ear & Nose-Throat Clinic, P.A., Robert McGrew, M.D., and Jeff Barber, M.D., Little Rock

"Diagnosing Systemic Disease From The Eye", sponsored by the Retinal Group, Ltd., R. Sloan Wilson, M.D., Little Rock

"Laboring Patients Demonstrate Oxygen Desaturation", sponsored by the Departments of Anesthesiology and Obstetrics/Gynecology, University of Arkansas for Medical Sciences, Richard B. Clark, M.D., Marie E. Minnich, M.D., Frank C. Miller, M.D., Dola S. Thompson, M.D., and Mark Brown, B.S., Little Rock

"Microsurgery - Trauma and Reconstruction", sponsored by the Hand Surgery Section of the Department of Orthopaedics, University of Arkansas for Medical Sciences, Marcia L. Hixson, M.D., Little Rock

"Optic Neuritis Treatment Trial", sponsored by the Department of Ophthalmology, University of Arkansas for Medical Sciences, Walter M. Day, M.D., Anne Luther, R.N., and Beth Lyon, Little Rock

"Prostatic Neoplasms: Ultrasound, Biopsies and Early Diagnosis", Carlos Araoz, M.D., A. David Hall, M.D., and D. Keith Mooney, M.D., Little Rock

"There Is Nothing That Can Be Done", sponsored by the Little Rock Orthopaedic Clinic, R. Barry Sorrells, M.D., Little Rock

Technical Exhibitors

A. H. Robins Company, Inc.
Abbott Laboratories
Adria Laboratories, Inc.
American Physicians Insurance Exchange
Arkansas Army National Guard
Baird, Kurtz & Dobson
Becton Dickinson and Company
Bio-Tech
Biotechnical Services, Inc.
Blue Cross Blue Shield of Arkansas
Bristol-Myers
Burroughs Wellcome Company
Cardiac Analysis Center
Ciba-Geigy Pharmaceuticals
Cummings X-Ray Company, Inc.
Dallas Rehabilitation Institute
Delta Surgical, Inc.
Dodson Insurance Group
Eli Lilly and Company
Formcraft of Arkansas, Inc.
Genentech, Inc.
Glaxo, Incorporated

Health Care Management Services
I Care of Arkansas, Inc.
ICI Pharmaceuticals
International Medical Electronics, Ltd.
J & B Quality Book Bindery, Inc.
James D. Foss and Associates
J's Home Care Medical Service, Inc.
Knoll Pharmaceuticals
Linde Homecare Medical Systems, Inc.
Marks Agency, Inc.
Med-Flight
Medical Office Management Systems
Merck Sharp & Dohme
Miles Division, Diagnostic Division
National Medical Rentals
National Wheelchairs, Inc.
Navy Recruitment District
Norwich Eaton Pharmaceuticals, Inc.
Ortho Pharmaceutical Corporation
Rather, Beyer & Harper, Inc.
Rivendell of Arkansas
Roche Laboratories
Roerig
Schering Corporation
Southern Medical Association
St. Paul Insurance Company
SWC Office Consultants, Inc.
Telecardio Systems
The Bridgeway
The Medical Protective Company
The University Hospital of Arkansas
The Upjohn Company
U. S. Air Force
U. S. Air Force Recruitment
Wyeth Laboratories
Wyeth-Ayerst Laboratory

WITH SINCERE APPRECIATION

The Council of the Arkansas Medical Society would like to express their appreciation and thanks to the following companies for their special contributions to the 1988 Arkansas Medical Society Annual Convention. Their assistance made the session a success.

Arkansas Blue Cross Blue Shield
American Physicians Insurance Exchange (API)
Burnett Pools and Spas
Burroughs Wellcome Company
Cellular One
Downtown Office Supply Company

National Medical Rentals
Pilgram Travel Service of Russellville
The Upjohn Company, Inc.
United Home I. V. Pharmacy
Parke-Davis
TCBY

ARKANSAS MEDICAL SOCIETY

1988-1989

OFFICERS

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President-elect	James R. Weber, P. O. Box 188, Jacksonville 72076
First Vice President	Glen F. Baker, 4301 West Markham, Slot 600, Little Rock 72205
Second Vice President	H. Aubry Talley, 403 West Oak, Suite 101, El Dorado 71730
Third Vice President	George V. Roberson, 1801 West 40th, Suite 7B, Pine Bluff 71603
Secretary	Charles Rodgers, 4202 S. University, Little Rock 72204
Treasurer	James M. Kolb, Jr., 305 Skyline Drive, Russellville 72801
Speaker	Sybil R. Hart, P. O. Box 312, Blytheville 72316
Vice Speaker	James L. Gardner, 125 Greenwood, Hot Springs 71901
Delegates to the AMA	Joe Verser, P. O. Box 106, Harrisburg 72432
	T. E. Townsend, 1420 West 43rd, Pine bluff 71603
	A. E. Andrews, 1311 Rio Grande, Texarkana 75503
Alternate Delegates to the AMA	John P. Burge, Route 1, Box 160, Lake Village 71653
	W. Payton Kolb, 230 Medical Towers Building, Little Rock 72205
	George W. Warren, P. O. Box W, Smackover 71762

EXECUTIVE COMMITTEE

Chairman of the Council	J. Larry Lawson, #1 Medical Drive, Paragould 72450
President	John M. Hestir, P. O. Drawer 512, DeWitt 72042
President-elect	James R. Weber, P. O. Box 188, Jacksonville 72076
Secretary	Charles Rodgers, 4202 S. University, Little Rock 72204
Immediate Past President	W. Ray Jouett, #5 St. Vincent Circle, #401, Little Rock 72205

COUNCILORS

District	Term Expires 1989	Term Expires 1990	Counties in District
1.	* Merrill J. Osborne 10th and Highland, Suite C Blytheville 72315	J. Larry Lawson #1 Medical Drive Paragould 72450	Clay, Craighead, Crittenden, Greene, Lawrence, Mississippi, Poinsett, Randolph
2.	Jim E. Lytle P. O. Box 2116 Batesville 72501	* John E. Bell 1300 South Main Searcy 72143	Cleburne, Conway, Faulkner, Fulton, Independence, Izard, Jackson, Sharp, Stone, White
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6.	* F. E. Joyce P. O. Box 2763 Texarkana 75504	James D. Armstrong P. O. Box 637 Ashdown 71622	Hempstead, Howard, Lafayette, Little River, Miller, Nevada, Pike, Polk, Sevier
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9.	J. Warren Murry P. O. Drawer A Fayetteville 72701	* Robert H. Langston P. O. Box 1350 Harrison 72602	Baxter, Benton, Boone, Carroll, Madison, Marion, Newton, Searcy, Van Buren, Washington
10.	A. C. Bradford (1989) P. O. Box 3528 Ft. Smith 72903	Gerald Stoltz P. O. Box 925 Russellville 72801	* Morton Wilson (1990) 1500 Dodson Ft. Smith 72901
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* Senior Councilor

REGISTRATION FIGURES 112TH ANNUAL SESSION

Physicians (including residents)	296	Technical exhibits	60
Medical students	2	Scientific exhibits	10
Auxilians	86	Informational exhibits	4
Guests	15		

Arkansas Medical Society Auxiliary Convention Report

April 21 - 24, 1988



*Mrs. W. Ray Jouett
President 1988-1989
Arkansas Medical Society Auxiliary*

The pre-convention board meeting of the Arkansas Medical Society Auxiliary was held at 2:00 p.m. on Thursday, April 21 with President Mary Gardner presiding. Action was taken on issues to be presented to the House of Delegates. Following the pre-convention board meeting, many of the Auxiliary members attended the Socio-economic Seminar in conjunction with the Arkansas Medical Society. The guest speaker for the seminar was I. Dodd Wilson, M.D., Dean, University of Arkansas for Medical Sciences.

On Friday, April 22, the Sixty-Fourth Annual Session of the Arkansas Medical Society Auxiliary was called to order by President Mary Gardner. Special guests were John M. Hestir, M.D., the Arkansas Medical Society staff and G. Douglas Talbott, M.D., of Smyrna, Georgia, speaking on the Impaired Physician and Medical Marriages. The key note addresses were given by Mrs. Gary Strebel, National Legislation Chairman, and by Mrs. Graham Milburn, President of Southern Medical Association Auxiliary.

Reports were given by officers, committee chairmen, and presidents of county auxiliaries with awards given to county units in the areas of membership, AMA-ERF, health projects, and Doctors Day.

A resolution involving impaired physicians and the area of malpractice litigation was passed. The 1988-89 budget was also presented and adopted. Discussion was held on the proposal to come before the National Convention in June regarding increases in auxiliary dues. Mrs. Gary Strebel led a legislative workshop entitled "Strategies for Effective Legislative Activities," and the past presidents had their annual breakfast together at the Capital Hotel.

A new slate of officers was elected: Mrs. Ray Jouett (Sara), President; Mrs. Larry Lawson (Nikki), President-elect; Mrs. David Williams (JoAnn), Recording Secretary; Mrs. Virgle Lyons (Sandy), Treasurer; N. W. Vice President, Mrs. James McDonald (Judy); N.E. Vice President, Mrs. Joe T. Wilson (Gail); S. E. Vice President, Mrs. Malcolm Pearce (Sue); and S. W. Vice President, Mrs. Allen Lee (Cathy).

A luncheon at the Little Rock Club finalized the Sixty-Fourth Annual Session with the inauguration of Mrs. Ray Jouett as President. Carolyn Long of Channel 4, the wife of a physician completing his residency, was the luncheon speaker.

The post-convention board meeting was held immediately after the luncheon.



Mrs. Ray Jouett, the 1988-89 Auxiliary President, accepts the gavel from Mrs. James Gardner. Mrs. Gardner was the 1987-88 president.

AUXILIARY ACTIVITIES



The Arkansas Medical Society Auxiliary Officers for 1988-89 are (left to right) Mrs. Ray Jouett, President; Mrs. Larry Lawson, President-elect; Mrs. David Williams, Recording Secretary; Mrs. Joe Wilson, Northeast Vice President; Mrs. James McDonald, Northwest Vice President; and Mrs. Allen Lee, Southwest Vice President. Officers not pictured are Mrs. Virgle Lyons, Treasurer; and Mrs. Malcolm Pearce, Southeast Vice President.



The Past Presidents met at the Capital Hotel, Saturday April 23, for their annual breakfast. Attendees included (seated, left to right) Mrs. Walter Mizell, Mrs. Raymond Peeples, Mrs. Mason Lawson, Mrs. W. Myers Smith, and Mrs. Frank Padberg; (standing, left to right) Mrs. Robert G. Valentine, Mrs. Frank Morgan, Mrs. Charles Wilkins, Mrs. Art Martin, Mrs. Paul Cornell, Mrs. C. Lynn Harris, Mrs. Deno Pappas, Mrs. Warren Boop, Mrs. Jerry Blaylock, and Mrs. A. S. Koenig. Attendees not shown were Mrs. Rosina Jones, Mrs. Herbert Taylor, Mrs. Louis Hundley and Mrs. Carl Parkerson.



Mrs. Jerry Blaylock (second from the left) met three members-at-large, (left to right) Mrs. Thomas Eans, Mrs. H. V. Kirby and Mrs. H. W. Thomas. Mrs. Blaylock was the 1987-88 Chairman of the Members-at-Large Committee.

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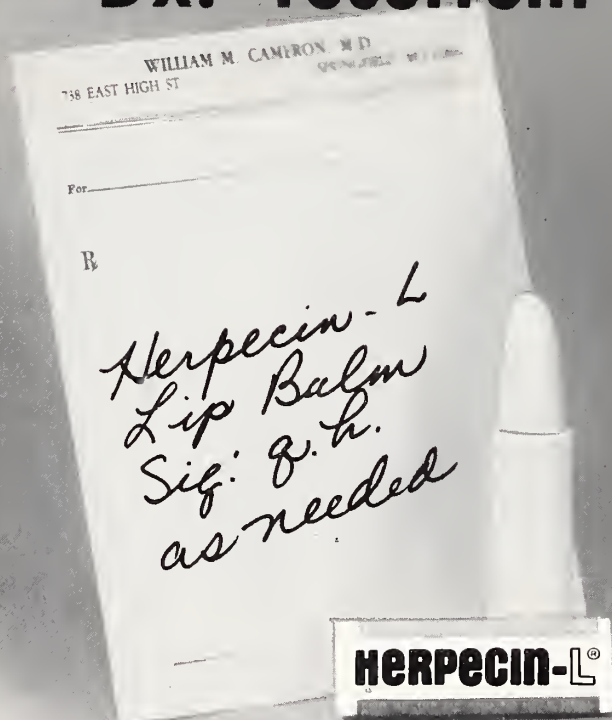
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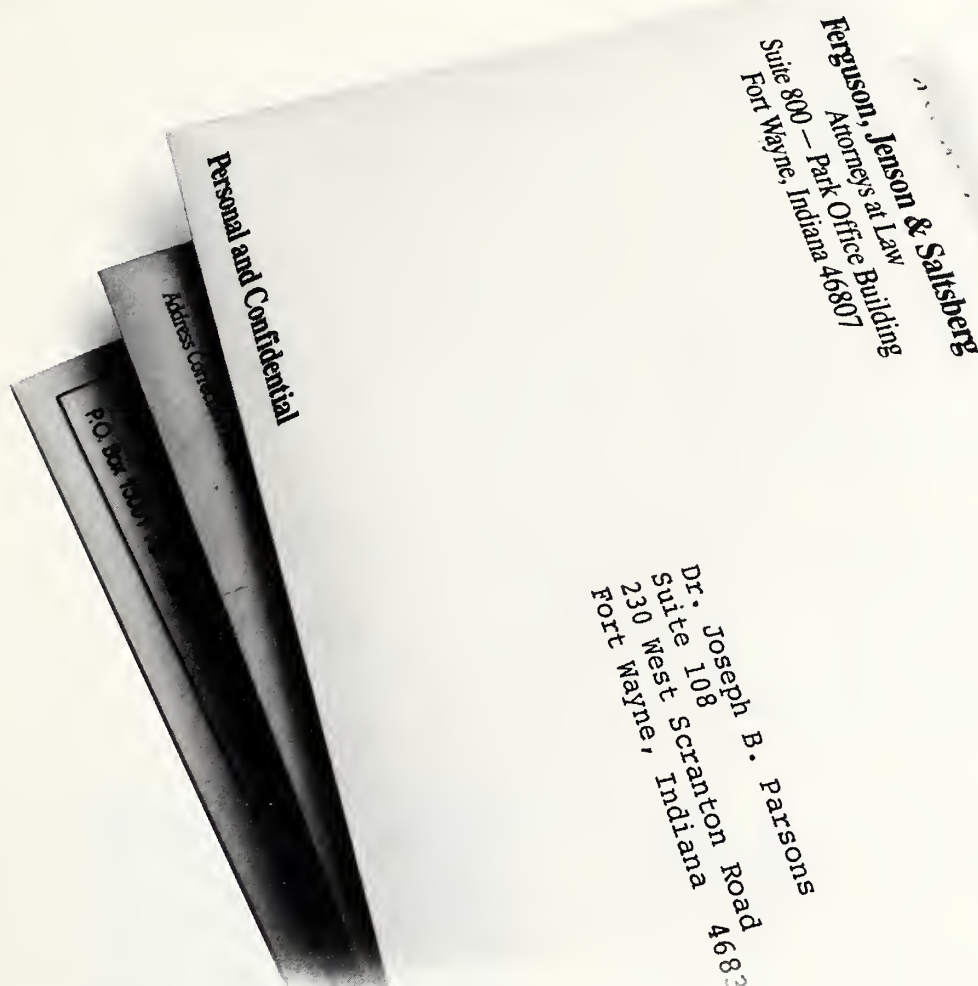
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Update: June 1988 New Arkansas Department of Health Regulation

William N. Jones, M.D.

In October, 1987, the AIDS Advisory Committee to the Arkansas Department of Health recommended to the Arkansas Board of Health that the condition of Human Immunodeficiency Virus (HIV) antigen or antibody positivity be reportable to the Arkansas Department of Health.

Subsequently, the Arkansas Board of Health approved this recommendation and after a public hearing on March 28, 1988, an appropriate proposed regulation was sent to the Arkansas Legislative Council for study and action.

The regulation was approved by the Legislative Council on April 15th, and went into effect May 1, 1988.

Specifically, Section IV titled "Notifiable Diseases and Conditions" contained in the "Rules and Regulations Pertaining to Communicable Disease Control" was amended to include:

"Human Immunodeficiency Virus (HIV) antigen or antibody positive individuals will be reported by name and address."

Representatives of the Arkansas AIDS Foundation and the Arkansas Chapter of the American Civil Liberties Union took issue with the new regulation and, in response, the following letter, written by myself, was published in the April 22, 1988, "Voices" column of the *Arkansas Democrat*.

Criticisms and concerns raised in two articles appearing in the Democrat on April 15 and 16 regarding the new Arkansas Department of Health regulation requiring the reporting of HIV positive persons needs rebuttal.

It is important that the public know that this is not a new strategy in the control of sexually transmitted diseases. The purpose of this regulation is to make it possible for the infected person to be counseled on all aspects of the infection and the determination of his or her sexual and drug contacts so they may be interviewed, counseled and offered testing.

The process known as contact tracing has been an historically proven technique for over 40 years and in large

measure is responsible for the control of syphilis and gonorrhea.

As of October 1987, 12 states required reporting of HIV positive individuals. At least seven states do active contact tracing.

Colorado was the first state with such a regulation. The director of the Colorado Department of Health, Dr. Thomas Vernon, reported in the February 1988 issue of The Internist that early in their program 265 HIV positive persons listed 430 contacts. Two hundred and sixty of these contacts were found, counseled and tested. Forty-two contacts were found to be HIV positive.

The 218 who were negative were counseled on their risk behavior and were offered repeat testing to cover the "window." We can see that 42 additional cases were found and could elect to not spread the virus and 218 persons were counseled and educated about AIDS and their risk behavior.

One concern raised is the possibility of a breach of privacy and confidentiality of the infected index person. One should also consider the rights of the previously uninformed contact.

The rights of an individual to privacy and confidentiality are protected in any sexually transmitted disease program; however, the bottom line is that individual rights have to be second consideration to the rights of the public to be protected from the spread of this fatal viral infection.

Some say there is no treatment, therefore there is nothing to be gained by contact tracing. AZT has been shown to lengthen the interval between the onset of HIV infection and the development of AIDS. Counseling that person on good nutrition and health habits and other supportive measures buys time for individual and family planning.

Concern that volunteer testing would decrease has not been the experience in Colorado, which in a survey of 22 states was second in the number of persons tested per 100,000 population.

In addition to helping control the spread of the virus, this regulation has a positive effect on the main tools we have for the fight against AIDS, education and behavior modification.

AIDS IN ARKANSAS 1988

January 1 - May 6, 1988

Total number of cases reported		36	CASES BY AGE GROUP	
Number of deaths		14	Less than 20	0
			20 - 29	13
			30 - 39	15
			40 - 49	4
			50 - 59	0
			60 or more	4
CASES BY SEX				
Male		32		
Female		4		
CASES BY RACE				
White		26		
Black		10		
CASES BY RISK GROUP				
Homosexual/Bisexual*		26		
IV Drug User		2		
Hemophiliac		0		
Transfusion		4		
Heterosexual		1		
NIR#		3		

* Out of the 22 homosexual/bisexuals, three are/were IV drug users

No identified risk group (NIR)

OPPORTUNISTIC DISEASE	
Pneumocystis Carinii	19
Kaposi's Sarcoma	2
Pneumocystis Carinii and Kaposi's Sarcoma	0
Other	15

AIDS IN ARKANSAS

1985 - 1988

Total number of cases reported		126	CASES BY AGE GROUP	
Number of deaths		69	Less than 20	0
			20 - 29	44
			30 - 39	53
			40 - 49	20
			50 - 59	3
			60 or more	6
CASES BY SEX				
Male		117		
Female		9		
CASES BY RACE				
White		99		
Black		27		
CASES BY RISK GROUP				
Homosexual/Bisexual*		97		
IV Drug User		14		
Hemophiliac		0		
Transfusion		5		
Heterosexual**		4		
NIR#		6		

OPPORTUNISTIC DISEASE	
Pneumocystis Carinii	64
Kaposi's Sarcoma	6
Pneumocystis Carinii and Kaposi's Sarcoma	3
Other	53

* Out of the 93 homosexual/bisexuals, 19 are/were IV drug users

** The three heterosexual cases represent two female contacts to IV drug users and the six NIR [No identified risk group] represent two (2) male contacts to prostitutes.

No identified risk group (NIR)

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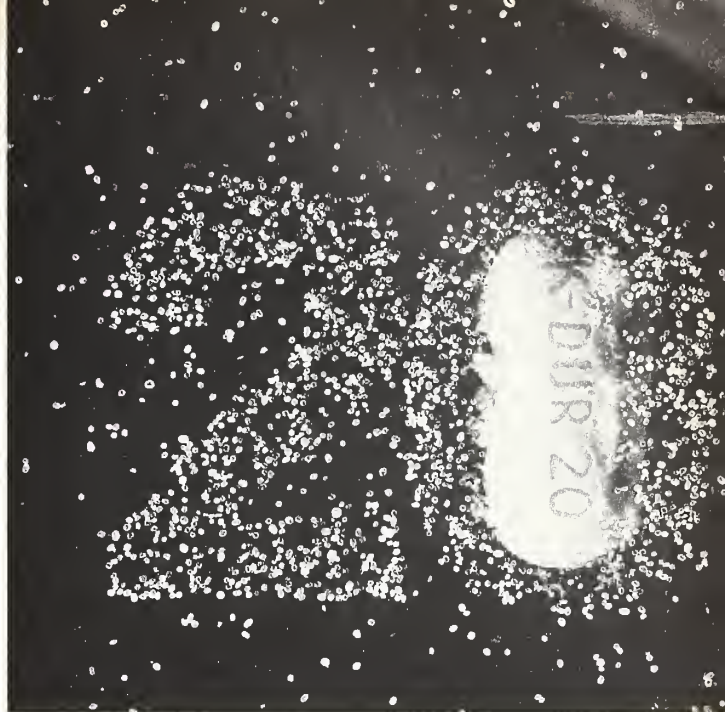
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1. For therapeutic use in patients with hypokalemia with or without metabolic alkalosis, in digitalis intoxication and in patients with hypokalemic familial periodic paralysis.

2. For the prevention of potassium depletion when the dietary intake is inadequate in the following conditions: Patients receiving digitalis and diuretics for congestive heart failure, hepatic cirrhosis with ascites, states of aldosterone excess with normal renal function, potassium-losing nephropathy, and with certain diarrheal states.

3. The use of potassium salts in patients receiving diuretics for uncomplicated essential hypertension is often unnecessary when such patients have a normal dietary pattern. Serum potassium should be checked periodically, however, and if hypokalemia occurs, dietary supplementation with potassium-containing foods may be adequate to control milder cases. In more severe cases supplementation with potassium salts may be indicated.

CONTRAINDICATIONS: Potassium supplements are contraindicated in patients with hyperkalemia since a further increase in serum potassium concentration in such patients can produce cardiac arrest. Hyperkalemia may complicate any of the following conditions: Chronic renal failure, systemic acidosis such as diabetic acidosis, acute dehydration, extensive tissue breakdown as in severe burns, adrenal insufficiency, or the administration of a potassium-sparing diuretic (e.g., spironolactone, triamterene).

Wax-matrix potassium chloride preparations have produced esophageal ulceration in certain cardiac patients with esophageal compression due to enlarged left atrium.

All solid dosage forms of potassium chloride supplements are contraindicated in any patient in whom there is cause for arrest or delay in tablet passage through the gastrointestinal tract. In these instances, potassium supplementation should be with a liquid preparation.

WARNINGS: Hyperkalemia—In patients with impaired mechanisms for excreting potassium, the administration of potassium salts can produce hyperkalemia and cardiac arrest. This occurs most commonly in patients given potassium by the intravenous route but may also occur in patients given potassium orally. Potentially fatal hyperkalemia can develop rapidly and be asymptomatic. The use of potassium salts in patients with chronic renal disease, or any other condition which impairs potassium excretion, requires particularly careful monitoring of the serum potassium concentration and appropriate dosage adjustment.

Interaction with Potassium Sparing Diuretics—Hypokalemia should not be treated by the concomitant administration of potassium salts and a potassium-sparing diuretic (e.g., spironolactone or triamterene) since the simultaneous administration of these agents can produce severe hyperkalemia.

Gastrointestinal Lesions—Potassium chloride tablets have produced ulcerative and/or ulcerative lesions of the small bowel and deaths. These lesions are caused by a high localized concentration of potassium ion in the region of a rapidly dissolving tablet, which injures the bowel wall and thereby produces obstruction, hemorrhage or perforation.

K-DUR tablets contain micro-crystalloids which disperse upon disintegration of the tablet. These micro-crystalloids are formulated to provide a controlled release of potassium chloride. The dispersibility of the micro-crystalloids and the controlled release of ions from them are intended to minimize the possibility of a high local concentration near the gastrointestinal mucosa and the ability of the KCl to cause stenosis or ulceration. Other means of accomplishing this (e.g., incorporation of potassium chloride into a wax matrix) have reduced the frequency of such lesions to less than one per 100,000 patient years (compared to 40-50 per 100,000 patient years with enteric-coated potassium chloride) but have not eliminated them. The frequency of GI lesions with K-DUR tablets is, at present, unknown. K-DUR tablets should be discontinued immediately and the possibility of bowel obstruction or perforation considered if severe vomiting, abdominal pain, distention, or gastrointestinal bleeding occurs.

Metabolic Acidosis—Hypokalemia in patients with metabolic acidosis should be treated with an alkalinizing potassium salt such as potassium bicarbonate, potassium citrate, potassium acetate, or potassium gluconate.

PRECAUTIONS: The diagnosis of potassium depletion is ordinarily made by demonstrating hypokalemia in a patient with a clinical history suggesting some cause for potassium depletion. In interpreting the serum potassium level, the physician should bear in mind that acute alkalosis per se can produce hypokalemia in the absence of a deficit in total body potassium while acute acidosis per se can increase the serum potassium concentration into the normal range even in the presence of a reduced total body potassium. The treatment of potassium depletion, particularly in the presence of cardiac disease, renal disease, or acidosis requires careful attention to acid-base balance and appropriate monitoring of serum electrolytes, the electrocardiogram, and the clinical status of the patient.

Laboratory Tests: Regular serum potassium determinations are recommended. In addition, during the treatment of potassium depletion, careful attention should be paid to acid-base balance, other serum electrolyte levels, the electrocardiogram, and the clinical status of the patient, particularly in the presence of cardiac disease, renal disease, or acidosis.

Drug Interactions: Potassium-sparing diuretics; see **WARNINGS**.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Long-term carcinogenicity studies in animals have not been performed.

Pregnancy Category C: Animal reproduction studies have not been conducted with K-DUR. It is also not known whether K-DUR can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. K-DUR should be given to a pregnant woman only if clearly needed.

Nursing Mothers: The normal potassium ion content of human milk is about 13 mEq per liter. Since oral potassium becomes part of the body potassium pool, so long as body potassium is not excessive, the contribution of potassium chloride supplementation should have little or no effect on the level in human milk.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: One of the most severe adverse effects is hyperkalemia (see **CONTRAINDICATIONS**, **WARNINGS**, and **OVERDOSSAGE**). There have also been reports of upper and lower gastrointestinal conditions including obstruction, bleeding, ulceration, and perforation (see **CONTRAINDICATIONS** and **WARNINGS**); other factors known to be associated with such conditions were present in many of these patients.

The most common adverse reactions to oral potassium salts are nausea, vomiting, abdominal discomfort, and diarrhea. These symptoms are due to irritation of the gastrointestinal tract and are best managed by taking the dose with meals or reducing the dose.

Skin rash has been reported rarely.

OVERDOSSAGE: The administration of oral potassium salts to persons with normal excretory mechanisms for potassium rarely causes serious hyperkalemia. However, if excretory mechanisms are impaired or if potassium is administered too rapidly intravenously, potentially fatal hyperkalemia can result (see **CONTRAINDICATIONS** and **WARNINGS**). It is important to recognize that hyperkalemia is usually asymptomatic and may be manifested only by an increased serum potassium concentration and characteristic electrocardiographic changes (peaking of T-waves, loss of P-waves, depression of S-T segment, and prolongation of the QT interval). Late manifestations include muscle-paralysis and cardiovascular collapse from cardiac arrest.

Treatment measures for hyperkalemia include the following:

1. Elimination of foods and medications containing potassium and of potassium-sparing diuretics.
2. Intravenous administration of 300 to 500 ml/hr of 10% dextrose solution containing 10-20 units of insulin per 1,000 ml.

3. Correction of acidosis, if present, with intravenous sodium bicarbonate.

4. Use of exchange resins, hemodialysis, or peritoneal dialysis.

In treating hyperkalemia, it should be recalled that in patients who have been stabilized on digitalis, too rapid a lowering of the serum potassium concentration can produce digitalis toxicity.

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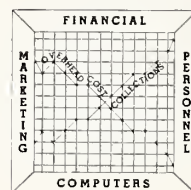
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Surgical Management of Post-Traumatic Prostatomembranous Urethral Strictures: A Ten Year Experience

*John F. Redman, M.D.**

It has been stated that strictures resulting from prostatomembranous urethral disruption secondary to pelvic fractures present major problems in surgical management owing to their location above the urogenital diaphragm and behind the pubis.¹ Since June, 1977, 16 adults with prostatomembranous urethral strictures have been surgically corrected by the author utilizing either a transpubic or perineal approach.

Clinical Material

A total of 16 patients ranging from 17 to 62 years of age (mean - 29 years) underwent surgical correction of a prostatomembranous urethral stricture.

The etiology of the strictures included pelvic trauma associated with a fractured pelvis in nine, pelvic trauma without pelvic fracture in one, severe straddle injury in two, a perineal puncture wound in one, and a shotgun wound in one. All had total disruption of the prostatomembranous urethra and were managed initially by suprapubic cystotomy.

All but two of the patients were managed initially elsewhere. In one patient, an initial transperineal repair was attempted, and in one a delayed attempt at penetration through the urogenital diaphragm with a sound, followed by a period of catheter drainage, established continuity between the prostatic and bulbous urethra but restricting soon recurred.

The interval between initial cystotomy and definitive surgical correction ranged from three months to one year (mean - six months). Strictures ranged in length from one to four cm (mean two cm).

Operative Technique

The initial six patients were managed by a transpubic approach in which a trapezoidal segment of the pubic symphysis was excised utilizing a Gigli saw. The anterior urethra was mobilized via a midline perineal incision. The bladder was not opened, but rather the existing cystotomy tract was utilized for manipulation of a sound to ascertain the termination of the posterior urethra and for postoperative urinary drainage.

The remaining nine patients were explored by a perineal approach. The incision was curvilinear, arching between the ischial tuberosities two cm above the anal sphincter. A midline extension at the apex of the arc provided exposure of the anterior urethra. In all patients the anastomosis was accomplished in an elliptical fashion utilizing interrupted 3-0 chromic catgut suture material. The urethra was splinted for three weeks with a #16 fenestrated plastic catheter. On removal of the catheter, integrity of the anastomosis was confirmed with a voiding cystourethrogram, and the suprapubic catheter was left in place an additional six weeks as a precaution lest early stricture formation occur. Patients were managed as outpatients after a period of hospitalization. The first six were hospitalized for three weeks, while the mean hospitalization period was 2.8 days for the last six.

Results

All patients were followed for a minimum of six months. There was no incidence of incontinence. One patient who underwent a transpubic urethroplasty quickly redeveloped a stricture following repair and was re-operated transpubically nine months later successfully.

One patient operated perineally developed a membranous synechia one week following removal of the urethral catheter, which was fractured by urethral sounding.

* Department of Urology, University of Arkansas for College of Medicine, 4301 West Markham, Slot 540, Little Rock, AR 72205-7199.



Figure 1a. Voiding cystourethrogram in patient with pelvic fracture and disruption of prostatomembranous urethra. Contrast medium does not enter anterior urethra.



Figure 1b. Post-operative voiding study following transpubic urethrourethrostomy.

All patients subsequently voided with a large stream (Figures 1a, 1b, 2a, and 2b). Three patients were noted in follow-up to have persistently infected urine and were subsequently noted to have vesical calculi, two of which were removed via a cystotomy incision while one was removed transurethrally.

Blood loss with the transpubic approach ranged from 250 to 2,500 cc (mean - 870 cc). Excluding the 2.5 liter loss, the mean was 544 cc. For the perineal exposure blood loss ranged from 50 to 630 cc (mean 338 cc). Eight patients were impotent pre-operatively and remained so post-operatively. Two patients who were potent pre-operatively reported loss of erections post-operatively following a perineal urethrourethrostomy.

Discussion

A review of the literature extant regarding management of prostatomembranous urethral injury as provided by Peterson who listed 237 references continues to demonstrate the controversy and confusion associated with this subject.² Traumatic prostatomembranous urethral rupture is almost always associated with fracture may produce such a rupture.³ In this series the avulsion in two patients was caused by straddling narrow planks of

scaffolding through sudden falls. One patient fell on a sharp metal spike and another suffered avulsion of the membranous urethra when wounded by a shotgun.

Signs which herald a prostatomembranous urethral disruption are physical and radiographic evidence of pelvic fracture, a bloody urethral emission, perineal ecchymosis and a displaced prostate on transrectal examination. When presented with any of these findings, the examining physician is best advised not to attempt placement of a urethral catheter, but to proceed as soon as practicable to the performance of a retrograde urethrogram. The patient is optimally placed in an oblique position for the examination; but since this is not always feasible or possible, any position which will image the area of the urogenital diaphragm is adequate. To secure the examination radio-opaque contrast medium which is suitable for intravenous injection is injected transurethrally by syringe in a retrograde fashion. A urethral disruption, partial, or incomplete, is heralded by a characteristic sunburst of the contrast medium in the region of the urogenital diaphragm.

The patient with trauma severe enough to cause prostatomembranous disruption frequently requires other surgical manipulations; and, therefore, the amount



Figure 2a. Combined cystogram and retrograde urethrogram in patient with complete prostatomembranous urethral disruption.

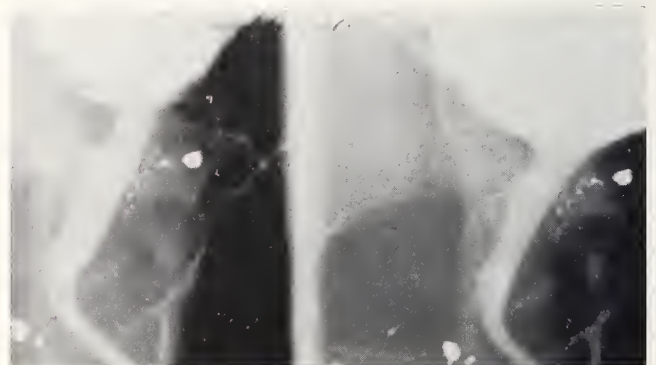


Figure 2b. Voiding cystourethrogram following perineal urethrourethrostomy.

of time available to reconstitute the urethra and the priority in which the urethral disruption may be addressed are considerations.

The degree of pelvic fracture and concomitant pelvic hemorrhage and displacement of the prostate are also considerations in determining whether to surgically place a cystotomy tube or proceed to an attempt at primary realignment of the severed urethra. An attempt to formally suture the urethral ends is usually an exercise in futility. If the urethral disruption is not great, an attempt may be made to guide a sound or a catheter stabilized by a mandrin through the anterior urethra in an attempt to meet the posterior urethra. Although primary alignment would seem to be a simple proposition, it has been suggested for the surgeon with limited emergency facilities and an infrequent experience, cystotomy alone should be the preferred method of initial management.⁴

Frequently literature related to the surgical correction of prostatomembranous urethral disruption of late has espoused the transpubic approach which does indeed provide wide visualization of the anterior aspect of the prostate and allows for the bridging of large defects.^{1,5} I would concur with the opinion of Pierce who believes that the pubectomy approach is seldom needed unless the patient cannot be placed in the exaggerated lithotomy position required for a perineal exposure.⁶

Although theoretically the morbidity associated with either the transpubic or perineal approach do not differ significantly, the perineal procedure requires less time to accomplish and is less strenuous to the surgeon. Approaching the stricture perineally does not preclude the transpubic route if a secondary operation becomes necessary to effect a patent channel. Some surgeons have successfully utilized a two-stage perineal approach to ultimately bridge the defect.⁷ Others call the two-stage antiquated.²

Incontinence following pelvic trauma and urethral avulsion has remained an enigma, the rate ranging from 0 to 33 percent.² Continence presumably is maintained by a competent vesical neck which is rarely injured with pelvic fracture and thus incontinence should also be rare. The thought has been advanced that the vesical neck is held rigidly open by dense surrounding hematoma fibro-

sis.⁸ To further confuse the issue it has been surmised that transurethral prostatic resection would surely cause incontinence. However, patients who have undergone successful urethrourethrostomy have subsequently successfully undergone vesical neck resection and remained continent.^{5,7}

Impotence following pelvic fracture, urethral avulsion and procedures to effect urethral continuity have been reported. Conversely, patients sustaining all three have remained potent. In addition, potency has returned two to three years following injury infrequently after urethral reconstruction. The regaining of potency after trauma has been correlated with either the conclusion of litigation or the exhaustion of workman's compensation benefits.²

Urethral stricturing that can follow urethrourethrostomy may respond to internal urethrotomy or urethral dilatation. Complete restricturing may respond to a perforation through the stricture followed by regular urethral dilatation. Repeat open operation is at times required.

The unfortunate patient who has sustained pelvic trauma and a urethral avulsion is indeed grateful to again micturate normally.

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ELECTROCARDIOGRAM OF THE MONTH

David Hicks, M.D.
John W. Watson, M.D.
UAMS Division of Cardiology
Little Rock, Arkansas

CLINICAL HISTORY:

A. S. is a 66-year-old woman with atypical chest pain. She experienced a near syncopal episode related to exertion. An exercise treadmill stress test was done. One minute and forty-five seconds into the exercise program, she developed this arrhythmia. Entry and exit strips with respect to the arrhythmia are shown. What do you think?

DISCUSSION:

The underlying sinus rate is 150/minute. A competing wide QRS arrhythmia is present at a slightly slower rate, about 145/minute. The widest QRS measures 0.14 seconds. Ventricular fusion beats are present. Some areas strongly suggest AV dissociation. ST depression is noted as the arrhythmia exits. The arrhythmia thus has strong features to suggest exercise provoked ventricular tachycardia.

The editor wishes to thank Dr. Hicks of Arkansas Baptist Medical Center for his assistance with this month's feature.



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Significance of a Positive Antinuclear Antibody: A Clinical Review

Eleanor A. Lipsmeyer, M.D.*

Antinuclear antibodies (ANA) performed by the immunofluorescence method are important in the diagnosis and management of rheumatic disease.¹⁻³ It is now apparent that several collagen-vascular and connective tissue diseases, e.g., systemic lupus erythematosus (SLE), scleroderma and mixed connective tissue disease (MCTD), are characterized by very distinct ANA profiles. Knowledge of these profiles allows diagnosis of several of these diseases and may allow the physician to predict the course of the disease.

Routine clinical testing procedures usually utilize tissue section substrates such as mouse liver, rat kidney, or a monolayer of fibrocytes. The serum to be tested is incubated with tissue sections and allowed to form a nuclear antigen-antinuclear antibody complex. The tissue is washed to remove any nonreacting antibody, and fluorescein-isothiocyanate-conjugated antibody against human IgG is added. The slide is then viewed under an ultraviolet lighted microscope, and the pattern and titer of positivity is determined.

When interpreting ANA tests, the age of the patient must be taken into account. In patients under 20 years of age, ANA positivity at any titer is abnormal and is generally thought to be related to collagen-vascular disease, such as juvenile rheumatoid arthritis or SLE. When caring for children, it is important to know whether the laboratory tests undiluted serum. In patients over the age of 40, the percentage of positive ANAs rises sharply, and some studies have reported an incidence of 50-60% positive ANAs in patients over 60.

Assays in pregnant women may show low ANA titers which disappear after delivery. In addition, false positives may occur in infectious and viral diseases, e.g., infectious mononucleosis and hepatitis, and in leukemia and lymphoma.

Certain nuclear and nucleolar antigens are concealed in organ tissue but are present in rapidly proliferating tissue culture cell lines. Thus, the routine ANA may be negative but the serum may test positive in subset testing.

Patterns of ANA Reactivity

Several patterns of immunofluorescence (IF) are currently recognized as indicators of reactivity to certain subsets of antinuclear antibody. However, one must remember that they are only gross indicators, and the specific antigen one is seeking must be tested for directly. At times, it is possible for one pattern of immunofluorescence to conceal another, perhaps more important, pattern.

The most commonly seen and least specific pattern is the diffuse or homogeneous pattern in which the entire nucleus fluoresces. It is thought to represent antibody to deoxyribonucleoprotein (DNP) and histone.⁴ This antibody is also responsible for the LE phenomenon and, as such, was the first laboratory test for SLE. It may be present in any of the collagen-vascular diseases except polyarteritis nodosa. It is thought to be the ANA generated in drug-induced lupus. Disease associated with this ANA subset is usually characterized by arthralgia and polyserositis such as pleuritis and pericarditis.

The rim or peripheral pattern usually denotes antibodies to native or double-stranded DNA (dsDNA). These antibodies are found primarily in patients with SLE, but there have been isolated reports of their presence in chronic active hepatitis and juvenile rheumatoid arthritis. Very low titers have been found in normal controls. Assays for anti-dsDNA are commonly done by immunofluorescence against *Crithidia luciliae*, a protozoan parasite of the blow fly. This organism carries its dsDNA in a kinetoplast separate from the nucleus so that IF of the kinetoplast is specific for antibody against dsDNA.⁵ This is a rapid test and has gained general acceptance as the routine test for anti-dsDNA antibody; high titers of anti-dsDNA antibody are associated with SLE nephritis and cerebritis.

* Department of Internal Medicine, University of Arkansas for Medical Sciences, 4301 West Markham, Little Rock, Arkansas 72205.

The nucleolar pattern has been associated with antibody against a 4-6 S ribonucleoprotein. It is considered to be the most specific for scleroderma,⁶ progressive systemic sclerosis (PSS), and up to 10% of patients with this disease have this antibody.

The speckled pattern seen on ANA may be of two types: one, a heavy clumped or thick thready type, and the other a "salt and pepper," or discrete dot pattern. When the speckled pattern is present, further differentiation must be done to determine the subset of antibody present. The first test in the series should be for antibody against Extractable Nuclear Antigen (ENA). If the serum tests positive for antibody against ENA, the substrate is treated with RNase. If the reactivity disappears, the antigen is thought to be RNase-sensitive, and is known as Ribonucleoprotein (RNP). Antibodies with this specificity are found in low titer in SLE, and in high titer in Mixed Connective Tissue Disease (MCTD). Serum with ENA specificity resistant to RNase is thought to contain antibody against Smith antigen (SM ag) which is quite specific for one form of SLE. Smith antigen and RNP may represent different antigenic determinants residing on the same macromolecular complex.

Mixed Connective Tissue Disease is a specific entity described by Sharp et al in 1976.⁷ In this disease, 85% of the patients have Raynaud's phenomenon, and approximately two-thirds have esophageal abnormality, myositis, diffuse interstitial fibrosis of the lungs, and swollen hands. Efforts should be made to establish this diagnosis since the symptoms of myositis improve on relatively small doses (15-20 gm) prednisone. However, in long-term follow-up of these patients, they are found to ultimately develop symptoms more consistent with scleroderma which does not respond to corticosteroids.

Smith antigen positivity is found in approximately 30% of patients with SLE. It is one of the best serologic tests for SLE because of its specificity. Any antibody directed against Sm ag is abnormal, and about 50% of patients with this antibody develop nephritis.

If the serum demonstrates a speckled pattern but antibody to ENA is negative, many other ANA subsets can be considered. However, we will discuss the antibodies which are currently thought to be most significant in their association with collagen-vascular disease. Antinuclear antibodies to be considered in this category include anti-SSA/Ro, anti-SSB/La, anti-Scl-70. Specific testing is done after the physician evaluates the patient and formulates his working diagnosis of collagen vascular disease.

In the evaluation of confusing collagen vascular disease, anti-SSA/Ro may be the most helpful. Antibody to SSA-Ro may be present in serum which has a negative routine ANA. This may occur since anti-SSA/Ro is tested on cells undergoing mitosis when covert antigens are expressed. Human B lymphoblastoid cell line (Wi2) cells are used as substrate. Tests for this antigen should

be done, especially if the patient presents with a skin eruption which resembles systemic lupus erythematosus but the serum tests are negative for ANA. In this instance, the disease is labeled as ANA-negative SLE, and the eruption seen with this condition is called subacute cutaneous lupus erythematosus (SCLE).⁸ It is marked by photosensitivity, malar rash and discoid lesions. In addition to the dermatitis, the patient may also have leukopenia, arthralgia and renal disease. Characteristically, the dermatitis is non-scarring and the systemic disease is mild. About one-fourth of all ANA patients with American Rheumatism Association criteria for SLE also have antibody against SSA/Ro. Approximately 40% of patients with Sjogren's syndrome have anti-SSA/Ro positivity.

Transplacental transfer of anti-SSA/Ro to infants may cause development of skin lesions in the infant. These lesions are generally non-scarring and follow the course of maternal antibody. The lesions tend to disappear when maternal IgG disappears.

There is now acknowledged to be an association with anti-SSA/Ro antibody in the mother with congenital heart block in the newborn.⁹ Anti-SSA/Ro was present in the serum of 34 of 41 mothers who gave birth to infants with congenital complete heart block. Immunofluorescence demonstrated antibody (IgG) deposition in the right atrial appendage of an infant with fatal heart block. Pregnant women who have SLE should be surveyed for the presence of anti-SSA/Ro and, if present, the fetus must be observed closely after the 26th week for slow or inappropriate heart rate. If an infant has cardiac block, the mother should also be surveyed for this ANA subset. If the patient again becomes pregnant, she and the fetus must be closely observed.

To date, we know of very few disease associations with anti-SSB/La. It is known to be present in 13% of patients with SLE. If it is present in association with anti-SSA/Ro, it is thought to protect against renal disease. No explanation for this protection has been developed. In addition, it is found in one-third of patients with Sjogren's syndrome.

Antibodies against Scl-70 are seen in Progressive Systemic Sclerosis (PSS), classic scleroderma. This antigen is reported to have a molecular weight of 70K, and has been shown recently to be the nuclear enzyme, DNA Topoisomerase I.¹⁰ This antinuclear antibody subset has been closely related to scleroderma, but its prognostic implications are still controversial. Scleroderma patients with this antibody tend to have more severe skin, joint and lung disease.¹¹

Anticentromere antibody (ACA) has become an important subset in the evaluation of patients with scleroderma or sclerodactyly.¹² This antibody is directed against the centromere and appears on routine ANA testing as a "fine dot" pattern; however, occasionally, nuclear staining may be negative with this antibody. In this case, se-

rum should be tested with a HEP-2 cell line with many cells arrested in mitosis. The pattern is then easily seen and is difficult to mistake for other patterns.

Results of a large scale testing for ACA show that it is most prevalent in CREST syndrome (Calcinosis cutis, Raynaud's phenomenon, esophageal dysfunction, sclerodactyly and telangiectasia), a relatively benign form of progressive systemic sclerosis, primary biliary cirrhosis and Raynaud's phenomenon. In one study, patients with ACA had lower percentages of major renal, cardiac, pulmonary and lower gastrointestinal tract involvement when compared with patients with speckled and nucleolar ANA patterns.¹³ It is rarely present in patients with PSS. Thus, this antibody measured in association with anti-Scl-70 may be used to predict the course of the disease. Presence of anticentromere antibody predicts a benign, slowly progressive disease, while the presence of anti-Scl-70 may be associated with more rapidly progressive disease.

Conclusion

In general, the following statements can be made about antinuclear antibody and its subsets:

Anti-histone antibodies (homogeneous pattern) are associated with arthralgia and polyserositis (pleuritis, pericarditis), not with nephritis or cerebritis.

The majority of patients with anti-double-stranded DNA (dsDNA) antibodies (rim pattern) have or will develop renal disease.

Most patients with SLE cerebritis have antibodies against dsDNA and the presence of circulating serum antibodies against dsDNA help to distinguish between SLE cerebritis and steroid-induced psychosis.

Neither anti-histone or anti-Smith antibodies are seen in progressive systemic sclerosis (scleroderma) and the antinucleolar pattern is considered most specific for scleroderma. Half of the patients with anti-Smith antibodies develop mild renal disease. Anti-histone and anti-dsDNA antibodies vary with the clinical activity of the disease; other ANAs with speckled and nucleolar pattern

immunofluorescence remain stable despite activity of disease.

High titers of anti-RNP antibody indicated Mixed Connective Tissue Disease (MCTD); lower titers occur in SLE. Anti-SSA/Ro may indicate ANA negative SLE. Subacute Cutaneous Lupus Erythematosus (SCLE), Sjogren's syndrome and its presence in the pregnant woman may be associated with neonatal lupus and/or complete heart block in the neonate. Anti-SSA/Ro may be associated with renal disease; anti-SSB/La in addition may protect against it.

Anti-centromere antibody usually indicates relatively mild disease such as Raynaud's phenomenon, CREST, or primary biliary cirrhosis whereas Anti-Scl-70 may predict more severe pulmonary, joint and skin involvement in scleroderma.

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Nolie Mumey, A Distinguished Graduate¹

*Edwina Walls, M.L.S.**

Nolie Mumey is a name not readily recognized by physicians in Arkansas, but in Colorado the name is well-known by physicians, Western art and history authors and collectors, aviators, and antiquarian bookmen.

Nolie Mumey was born in Shreveport, Louisiana, February 8, 1891, but in his second year was moved to a farm south of Jenny Lind, Arkansas, where he lived with his parents until 1912. Then, at the age of 21, he moved to Little Rock to pursue his career as a physician at the University of Arkansas, Medical Department.

From his first day as a student, Dr. Mumey remembered this statement made by Dr. J.A. Dibrell, Jr., a founder of the school. "Today, I wish to welcome you as medical students, and I trust in the future you will be students of medicine." Dr. Mumey remained a student of medicine and pursued many other areas of interests throughout his life. He received his M.D. on May 11, 1916, and was licensed to practice in Arkansas on May 31st of the same year. He served as House Physician at the Logan H. Roots Hospital in 1916-1917 and was also an Assistant in Surgical Technique at the U of A Medical Department. It was during this time that he invented the Mumey Indirect Blood Transfusion Apparatus.²

Concurrently, he was a staff doctor at the City Hospital in Little Rock. There he met an R.N., Viola Lee, who was on the staff. She secretly became Mrs. Nolie Mumey on February 23, 1918, shortly after he received orders to report for duty in World War I.³ The marriage was kept a secret because married women were not allowed to work, and she wanted to keep her job as Superintendent of Nurses at City Hospital.

When he returned from the war, Dr. Mumey and his wife decided to move West. Mrs. Mumey was recuperating from the 1918 influenza epidemic and they were searching for a place to establish his private practice.



Their route west led though Grenville, New Mexico. The town was earnestly seeking a physician. Fortunately, the state of New Mexico was offering each ex-service doctor from World War I who settled in the state a \$3,000 bonus. This seemed to a fortune to this 28-year-old doctor! Dr. Mumey remained in practice there until 1922 when the town began to decline because of droughts and crop failures.

Prior to relocating in Denver, the city which was to be his lifelong home, Dr. Mumey enrolled at the Graduate School of Medicine, University of Pennsylvania to work for the Master of Science (Medicine) degree. He studied there until the fall of 1924 when his funds were depleted. Not until eight years later, 1933, was he able to return and complete his degree.

Dr. Mumey arrived in Denver in November 1924. He rented an office at 520 Majestic Building and initiated his distinguished surgical/medical career in Colorado.⁴ In 1925, he began his pursuit of two lifelong avocations - fishing and book collecting. Another of his interests, aviation, was renewed when he became a Captain of the Medical Corps - Air Service in the National Guard of the

* University of Arkansas for Medical Sciences Library, 4301 West Markham, Little Rock, Arkansas 72205.

state. He was certified as a flight surgeon on April 5, 1929.

In the private sector, he was named company doctor for Continental Airlines in 1937 when the company was organized and their headquarters established in Denver. He served with the airline for 32 years, resigning when their corporate headquarters were moved to California in March 1969. One aviation organization of which Dr. Mumey was a member all his life was the Aero Medical Association now known as the Aero Space Medical Association. He was elected a Fellow of the Association in 1946. He was elected to the Denver Post Gallery of Fame in 1951 for his achievement of focusing the eyes of the world on Denver as aviation medicine progressed and space medicine began. A year later, 1952, the American Board of Preventive Medicine recognized Aviation Medicine as a specialty and November 8, 1953, Dr. Mumey received a certificate for proficiency in that specialty. He was nationally recognized for his work.

Dr. Mumey's multifaceted interests are too many to include in one brief article, but mention must be made of his writing. His earliest writing began during medical school days when he was associate editor of *The Razorback* in 1916. He was the Class Poet of his senior class. Also, he published two scientific articles in the *Journal of the Arkansas Medical Society* while interning at City Hospital in 1917.⁵ However, he began to write seriously when he published his Master's thesis, "A Study of Rare Books", at the University of Denver in 1930. He wrote prolifically on Denver and the West. Each year from 1942-1983, Dr. Mumey wrote a book of poetry, which expressed his philosophy and which was distributed as a Christmas greeting to his patients and friends.⁶ In 1975, he wrote a history of his beloved medical school entitled *University of Arkansas School of Medicine ...: Reminiscences of the Years 1912 - 1916*.⁷

For his writings he was awarded a Life Membership in the Denver Press Club, an organization primarily comprised of newspaper reporters. In 1954, he was elected to membership in the Colorado Author's League. The American Antiquarian Society elected him a member of the Society in 1970 for his outstanding contributions to literature.

Of the many awards presented to Dr. Mumey, two were the most appreciated. One was a Special Centennial Award presented to him in 1976 by the Colorado Medical Society, which recognized his unceasing devotion to medicine and his ardent fervor in preserving medical history. The other was the proclamation by Governor Richard Lamm of "Dr. Nolie Mumey Day" on May 4, 1978. The proclamation stated in conclusion, "Dr. Nolie Mumey is an excellent example of all Coloradans of the success of his philosophy: 'If you're always learning, you don't have time to grow old or unhappy.'" The Denver Medical Society noted that he was the first physician in Colorado to have a special day dedicated to him by the Governor of the state.

Dr. Mumey never retired. On the last day in his office, October 14, 1983, he cared for five patients. He became ill about noon and went home. Three months later he died peacefully at his home on January 22, 1984.

Dr. Mumey certainly epitomized his philosophy on being busy, "One should try to seize every opportunity possible to learn and improve. Do not throw away all those spare moments." His long and productive life bears testimony that he lived by this philosophy.

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3. Dr. Mumey was married to Viola Lee from 1918-1942. In June, 1943, he married his wife of 36 years, Mrs. Ruth Printz Hanrahan. Norma L. Flynn, the author of his biography and Literary Secretary for 35 years, became his wife in 1980.
4. About 1930, Dr. Mumey moved his practice to 1612 Tremont Place and in 1964, he purchased an office for himself at 1510 Humboldt Street where he practiced for 20 more years.
5. See note 2 and Mumey, Nolie: "Paraffin Treatment for Burns," *Journal of the Arkansas Medical Society* 14(2): 36-38, July 1917.
6. A complete biography of his writings may be found on pages 195-216 of his biography (see note 1).
7. Mumey, Nolie: *University of Arkansas School of Medicine, with an early history of the State, its natural resources, and the founding of the University; reminiscences of the years 1912-1916*, Denver, Colorado: Range Press, 1975.

Arkansas boasts of many fascinating physicians who founded the excellent medical system we enjoy in our state today.

We would like you to help tell their stories through the "From Other Years" column. If you are interested in submitting a biography, contact the Journal office at Post Office Box 5776, Little Rock 72215 or call 224-8967.

Cholesterol: Current Concepts for Physicians

Self-Study Course for Physicians. Sponsored by the National Health, Lung and Blood Institute. A national cholesterol education program is available through the Arkansas Medical Society office in which the physician studies at home. Two hours Category I credit. Further information: David Wroten, Arkansas Medical Society, P. O. Box 5776, Little Rock, AR 72215; (501) 224-8967.

Coronary Care Course

June 28 - 30; July 5 - 7; and July 12 - 14; 7:00 a.m. - 3:00 p.m. Presented by A. Scott Hardin, M.D.; Larkin M. Wilson, M.D.; Kay Moore, BSN; and Angie Gilbreath, BSN. Sponsored by AHEC South Arkansas. Warner Brown Hospital. Three hours college credit through Southern Arkansas University, Magnolia. Fee: \$750.00.

Annual Family Practice Intensive Review

July 1-3, Friday and Saturday 7:30 a.m. - 5:00 p.m. Sunday 7:30 a.m. - 2:30 p.m. Presented by Dr. Ben N. Saltzman. Sponsored by the University of Arkansas for Medical Sciences. UAMS Education Building, Room G141A. 20.25 hours of Category I credit. Fees: \$200, physicians; \$100 physicians assistants; \$35, residents.

Health Assessment Workshop

July 7 - 9, 1988, 8:00 a.m. - 5:00 p.m. Presented by Claudia Leath, R.N., MNSc; Sandra Moody, R.N., MNSc; and Cheryl Rhodes, R.N., MSN. Sponsored by UAMS College of Nursing. AHEC Conference Room, AHEC Building, El Dorado. Twenty-four contact hours CME. Fee: \$120.00.

Monitoring Cardiovascular Risk in Premenopausal Women

July 8, 12:30 p.m. Presented by Dr. Stephen Manus. Sponsored by AHEC, Fort Smith. Sparks Regional Medical Center.

Should MD's Always Tell Patients the Truth?

July 14, 12:30 p.m. Presented by Russell Williams, MSW. Sponsored by AHEC, Fort Smith. Medical Library, Sparks Regional Medical Center.

Antibiotics Annotated

July 13, 12:00 noon. Presented by Dr. Clifford Waldo. Sponsored by AHEC, Fort Smith. Fourth Floor Conference Room, Sparks Regional Medical Center.

IDM & Hypoglycemia

July 19, 12:00 noon. Presented by Dr. Don Walter. Sponsored by AHEC, Fort Smith. Seventh Floor Dining Room, Sparks Regional Medical Center.

Osteoporosis

July 20, 12:00 noon. Presented by Dr. Steve Aarnoff. Sponsored by AHEC, Fort Smith. Fourth Floor Conference Room, Sparks Regional Medical Center.

Antibiotics for the Office-Based Physician

July 26, 12:30 p.m. Presented by Charles Marsh, Pharm. D. Sponsored by AHEC Fort Smith. Medical Library, Sparks Regional Medical Center.

Carcinoma of the Pancreas

August 3, 7:00 a.m. Presented by Dr. Bassam Saffouri and Dr. Donald L. Duncan. Sponsored by AHEC, Southwest. St. Micheal Hospital.

Treatment of Acute Chemical Exposure

August 5, time to be announced. Baptist Medical Center Shuffield Auditorium. Further information available from BMC.

Echo-Cardiology

August 5, 12:00 noon luncheon. Presented by local physicians. Sponsored by AHEC, Southwest. Wadley Regional Medical Center.

Hypertension Update

August 9, 12:30 p.m. Presented by Charles Marsh, Pharm. D. Sponsored by AHEC, Fort Smith. Medical Library, Sparks Regional Medical Center.

Dermatology

August 10, 12:00 noon. Presented by Dr. Susan Mallory. Sponsored by AHEC, Fort Smith. Seventh Floor Dining Room Sparks Regional Medical Center.

Cine Radiology

August 19, 12:00 noon luncheon. Presented by local physicians. Sponsored by AHEC, Southwest. Wadley Regional Medical Center.

Improving Patient Compliance I & II

August 24-25, 12:30 p.m. Presented by Russell Williams, MSW, and Charles Marsh, Pharm.D. Sponsored by AHEC, Fort Smith. Sparks Medical Center.

Recurring Education Programs

As organizations accredited for continuing medical education by the Arkansas Medical Society, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), each Friday, 12:15 p.m., Conference Room, Building 1, VAMC
Mortality/Morbidity Conference, fourth Wednesday, 2:45 p.m., Conference Room, Building 1, VAMC.

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon for Medical/Dental Staff, varying topics, alternating Fridays, 12:30 p.m., Classrooms, AMI National Park Medical Center

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Metabolic Neurology Conference, first Wednesday, 1:00 p.m., Physicians Lounge, 2nd Floor
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Second Floor Classroom
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday when applicable, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first and third Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Sturgis Building, Rooms S120-121
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium
Cancer Conference, third and fourth Thursday, 12:00 noon, Room S1174K, Lab
General Medicine Journal Club, each Tuesday, 12:00 noon, Petit Jean Room
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Maumelle Room
Pediatric Conference, first Tuesday, 12:30 p.m., Maumelle Room
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, DeSoto Room

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and case presentations
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES - LITTLE ROCK

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Conference Series, times and dates vary, UAMS Education Building, Room G/110 A&B
Anesthesia Morbidity and Mortality Conference, every second and fourth Tuesday, 6:45 a.m., UAMS Education Building, Room G/110 A&B. Every first, second and third Thursday, 4:00 p.m., Room G/112 A&B.
Child Psychiatry Clinical Case Conference, first Friday, 1:00 p.m., UAMS Child Study Center Conference Room.
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B

Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium
Medicine Research Conference, each Wednesday, 4:30 p.m. Shorey Building, Room 3506
Neurology Clinical Case Conference, three or four Thursdays per month, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.
Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (7D33) and LRVAMC (Autopsy Room).
Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7D33.
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Basic Science Conference, occasional Tuesdays, 11:00 a.m., UAMS Education Bldg., Room B/135.
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds/Clinical Case Conference, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building, Room 159
Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Morbidity and Mortality Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A.
Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A
Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Conference, last Wednesday, 5:00 p.m., UAMS
Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS
VA Diagnostic Imaging Conference, every Tuesday, Wednesday and Thursday, 8:00 a.m., LRVA Nuclear Medicine Conference Room, Room 1D173
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., NLRVA, Building 66, Room 38
VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., NLRVA Building 89, Conference Room, or Arkansas Rehab Institute
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Surgery Service General Chest Topics (Combined Surgery/Medicine Lung Conference), every other Monday, 12:15 p.m., LRVA, Room 2D109.
VA Surgery Service Lung Cancer Conference, every Tuesday, 3:00 p.m., LRVA, Room 2E142.
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Tumor Conference, each Tuesday, 1:00 p.m., VAMC, Room 2D109

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Wamer Brown Hospital
Fracture Conference, third Tuesday, 12:15 p.m., AHEC-South Arkansas
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pediatric Conference, third Friday, 12:15 p.m., Union Medical Center.
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital
Medicine Teaching Conference, first, third and fifth Thursday, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville
Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center
St. Mary's Saturday Morning Problem Conference, each Saturday, 8:30 a.m., St. Mary's Rogers Hospital, Rogers, AR.

FORT SMITH-AHEC

Neurology Conference, second Thursday, 12:30 p.m., Sparks Regional Medical Center, Medical Library

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, every four months, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, MO
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
Neurological-Neurosurgical Conference, first Monday, 12:00 noon, St. Bernard's Dietary Conference Room
Neuroradiology Conference, second Friday, 12:00 noon, St. Bernard's Dietary Conference Room
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Wynne Tumor Conference, third Tuesday, 6:00 p.m., Grecian Steak House, Wynne, every four months.

PINE BLUFF-AHEC

Behavioral Science Conference, each Thursday, 12:30 p.m., Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, third Tuesday, 6:30 p.m., Rosswood County Club. Dinner meeting.
Sub-Specialty Conference, first Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Surgery Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Cardiology Conference, alternating Fridays, 11:30 a.m., St. Michael Hospital
Neuro-Radiology Conference, second and fourth Wednesday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Surgeons and Pathologists Conference, second Thursday, 7:00 a.m. breakfast, Wadley Regional Medical Center

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SPECIAL REPORT

Summary of AMA Responses to the Shortage of Nurses at the Bedside

In many parts of the United States there is a shortage of nursing personnel at the bedside which impedes access to medical care. This has occurred despite the fact that there are more nurses in the workplace than at any other time of history. There are 1.9 million registered nurses, and about 850,000 licensed practical nurses (LPNs), for a total of over 2.5 million. Sixty-eight percent of the 1.5 million RNs are employed in hospitals. It is estimated that there are approximately 350,000 nurse practitioners and clinical nurse specialists. In hospitals, 71% of the nursing force are technical nurses with a two year associate degree or a three year diploma preparation. Licensed practical nurses are employed in larger proportions by the Veterans Administration and the Armed Forces. Only 7.1% of all RNs work in nursing homes and long-term care facilities.

Since 1868, the AMA has supported quality education for nurses. In 1954, as hospital-based diploma programs continued to decline, the AMA expressed its concern for availability of nurses as a medical resource for quality patient care. In 1958, the AMA's House of Delegates urged that operating room experience was considered necessary for nurses in training.

In 1965, the American Nurses Association published a position paper supporting two levels of entry into practice, the Associate Degree Nurse (ADN) from community colleges, and the four year Bachelor of Science Nurse, the BSN. The ANA recommended the systematic replacement of LPNs and Diploma programs with associate degree education. In response the AMA reaffirmed support for nursing programs at all levels, and emphasized the need to prepare bedside nurses.

In 1979, the shortage of nurses giving direct patient care was recognized by organized medicine as urgent and in 1981 AMA's House called for education of medical-surgical nurses devoted to direct patient care.

During the deep recession of the early 1980's no nursing shortages were reported and the shortage of personnel in long-term care facilities was subdued but

chronic. Selective hiring of RNs over LPNs, and BSNs over ADNs occurred in hospitals except in the Veterans Administration and the Armed Forces where hiring regulations were fixed.

In 1986 physicians complained that a shortage of nurses was causing a closure of critical care units and medical-surgical beds. The Delegate from Rhode Island submitted a resolution to the House recommending a report on nursing education and the supply of nursing personnel. It became clear that the shortage of nurses was effecting select populations, particularly in the Atlantic states, California, and parts of the South, including Texas. The Veteran's Administration, the Armed Forces and geographic areas still suffering from recession were the least affected. The present shortage is occurring in critical care, the operating room and medical-surgical units. The shortages in long-term care exacerbate and compound the shortage of nursing at the bedside in acute care hospitals.

Reasons for the shortage

Several reasons for the shortage have been suggested by organized nursing. It is claimed that the shortage has occurred from lack of economic incentive to remain at the bedside. Nursing salaries are compressed below \$45,000 for bedside nursing care. It has also been noted that the image of nursing as a desirable and powerful profession compares poorly with other professions such as medicine and law, resulting in a decreased applicant pool for health care professionals.

Benefits for extended education should be compensatory, economically and professionally. Autocratic and bureaucratic physician-nurse relationships in hospitals contribute to the problem. Application to all programs of nursing are decreasing and image, salaries, and professional independence are required to recruit and retain nursing personnel.

Education policies which accentuate leadership skills and primary health care rather than technical skills now required in critical care and operating room nursing are also implicated in the shortage problem.

The recommendation of the House of Delegates Report CC (I-87) on Nursing Education and the Supply of Nursing Personnel in the United States is paraphrased as follows:

1. Continue to support all levels of nursing education.
2. Support government and private initiatives to recruit and educate nurses at the bedside.
3. Support economic and professional incentives to attract and retain high quality individuals to provide bedside nursing care.
4. Support hospital based continuing education programs for bedside care givers, especially in critical care units.
5. Develop quality education programs and methods of accreditation to increase the availability of care givers at the bedside in cooperation with other organizations concerned with acute and chronic hospital care.

The AMA's Board of Trustees has accepted in principle a plan to implement the recommendation emphasizing creative approaches to solve the problem. The essential components of the plan are to promote the education and accreditation of bedside care givers called "Registered Care Technologists" to meet the demand for high quality technical care at the bedside. The plan includes:

1. Organize a task force of interested associations to develop consensus and coordinate initiatives to solve the shortage of bedside care personnel in acute and long-term care institutions.
2. Develop education programs for Registered Care Technologists at basic and advanced levels of preparation.
3. Promote development of continuing education programs to develop advanced critical care technologists.
4. Coordinate programs of education for bedside care technologists.

These programs would interface with LPN and Diploma nursing programs. The basic preparation of care technologists emphasizes the monitoring of physician regimens, recording of patient observations, use of the computer to maintain patient records, and the compassionate maintenance of activities of daily living.

The advanced registered technologist will be taught skills in critical care of all kinds, receiving theoretical instruction through continuing education programs and technical instruction at the bedside. Nurses would be eligible to become Registered Care Technologists.

The program, accredited nationally, possible by CAHEA, would qualify candidates for state licensure through local statutes. Pilot programs will be conducted in selected states.

Legislative Action taken on AMA's Medicare Reform Plan

A legislative proposal based on AMA's plan to reform the Medicare program has been introduced by Representative Charles Rose (D-NC). The AMA soon will begin seeking co-sponsors for the bill, H. R. 4455, which would place Medicare on a fiscally sound basis by prefunding

future benefits. It would immediately alter the present system of coverage by permitting the elderly to purchase private health insurance policies of their choice through a voucher system. The measure would increase the level of cost-sharing for those who are financially secure and would provide protection against catastrophic health care expenses.

The voucher system would be financed by a tax on adjusted gross income during an individual's working years and by continuation of the current employer health insurance payroll tax. Tax rates would be set at a level sufficient to meet obligations of current Medicare beneficiaries and to prefund benefits for future beneficiaries, whose numbers will increase sharply during the next century.

H. R. 4455 was drafted by AMA to implement AMA Board of Trustees Report MM, which was approved by AMA's House of Delegates at its 1986 Annual Meeting. When introducing the bill, Congressman Rose said he hoped it "will kindle the debate on the future of Medicare." Planning for the care of a growing elderly population is imperative, he said, since the present pay-as-you-go system threatens future generations with unreasonable burdens. He plans to stimulate support for the bill in a "Dear Colleague" letter that soon will be sent to all Members of the House of Representatives.

Professionals to Review Proposed Joint Commission Mental Health Standards

The Joint Commission on Accreditation of Healthcare Organizations is proposing new and revised standards for non-hospital organizations that provide mental health, mental retardation and developmental disability, and alcohol and drug abuse services. The standards under consideration are currently being reviewed by more than one thousand health professionals across the United States. If approved by the Joint Commission, the changes would provide for an improved focus of the standards on contemporary practices in these fields.

"The proposed standards address the special needs of children and adolescents, and of mentally retarded and developmentally disabled individuals," said Paul Schyve, M.D., director of the department of standards as the Joint Commission. "In addition, the revised standards reflect the structures of the growing number of non-hospital organizations providing mental health and mental retardation and developmental disability services."

Final standards will be published in the 1989 edition of the Consolidated Standards Manual (CSM).

A Child and Adolescent Care Task Force recently proposed the new standards covering this area of care. These standards address the competence of practitioners, coordination of practitioner services, patient rights, normalization of the environment, family involvement, and other areas vital to quality care. Many of the new stan-

dards for mental retardation and developmental disability services are based on standards previously developed and used by the Joint Commission, but not included in the current manual.

IN OTHER BUSINESS, new standards for managing environmental safety will replace all current standards used by the Joint Commission in surveying the technology, physical plant and environment of the more than 5,100 accredited hospitals in the nation. Beginning January 1, 1989, hospital safety and engineering programs will undergo scrutiny against four standards which address safety management, life safety, equipment management, and utilities management.

"With the public eye focused on critical responsibilities such as asbestos surveillance and staff training in handling hazardous materials and wastes, top management is becoming increasingly aware that a safe environment and reliable equipment translate into better patient care," said Ode Keil, the Commission's director of plant and technology management.

The standards were reviewed by a diverse core of more than 1,000 working professionals, including hospital CEOs, medical staff presidents, quality assurance and risk management professionals, physical plant managers, clinical engineers, safety officers, and government agency representatives. Most said the new standards could be easily implemented within one year.

The survey scoring guidelines used by Joint commission surveyors in their on-site visits to hospitals will shortly be reviewed through a process similar to that used for the standards evaluation.

The new standards include provision for the frequency of internal surveys to identify environmental hazards and unsafe practices and the communication of safety findings to hospital leaders. Also included in the standards will be the reduction of total paperwork needed for new construction and renovation of hospitals as well as a more efficient and comprehensive "equivalency" system through which organizations can meet Joint Commission standards by being in compliance with Life Safety Code requirement.

AMA Urges Regulation of "Smokeless Cigarette, Applauds Northwest for No Smoking Flights

The American Medical Association has filed a formal petition with the Food and Drug Administration (FDA) urging the agency to regulate the "smokeless cigarette," a

new smoking product developed by R. J. Reynolds Tobacco Company, announced James H. Sammons, M.D., executive vice-president of the AMA.

Introduced by RJR at a press conference last September 14, the "smokeless cigarette" burns no tobacco and nicotine is delivered to the user through a tiny metal capsule which, when heated, produces an aerosol resembling tobacco smoke.

Dr. Sammons said the AMA has taken this step because of concern that without FDA intervention, the product would be sold to consumers with no review of its ingredients of its safety. "The American public has the right to expect that the products they consume have been judged safe for human consumption before being placed on the shelves for sale. On this issue, we are simply unwilling to accept on faith the new product of any industry that still denies that smoking is unhealthy," said Dr. Sammons.

The AMA petition points out that the FDA has regulated other forms of nicotine delivery, such as nicotine gum and a non-tobacco cigarette that produced nicotine vapor. The petition also cites the RJR patent which states that "pharmacologically or physiologically active agents" such as ephedrine, metaproteranal or terbutaline may be included in the product.

Under federal law, the FDA has six months to respond to the AMA petition. The agency's response can be then reviewed by the federal court.

IN ANOTHER AREA of the AMA's fight against smoking and smokeless products, Northwest Airlines was congratulated for implementing its smokefree policy on all commercial flights in North America. In a letter to Steven G. Rothmeier, Chairman and CEO, AMA commended Northwest for its bold action, foresight, and commitment to its no-smoking stance on flights.

Recently all U.S. airlines were required to prohibit smoking on all flights in the nation that are two hours or less. Northwest elected to extend the ban to all its flights. "It is encouraging indeed that as more and more people accept the deadly facts about smoking, corporate America, too, is weighing these facts and coming to understand that it good business to take a stand for public health," Dr. Sammons said in his letter to Rothmeier.

Anyone who violates the new no-smoking law is subject to a \$1,000 fine. In addition, a \$2,000 fine will be issued if it is found that lavatory smoke alarms have been altered or tampered with in any manner.

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Muscular Dystrophy Association, Jerry Lewis, National Chairman

William N. Jones, a Little Rock dermatologist and chairman of the AMS Special Committee on AIDS, spoke recently to the Arkansas Association of Legal Secretaries and the Arkansas Personnel Association on current issues concerning AIDS. The program included a physician and a lawyer in the discussion.

Dr. W. Clyde Glover was named a member of the Honorary Board of Governors of the Baptist Medical System Foundation. Dr. Glover is a North Little Rock radiologist and vice president of Radiology Consultants. The foundation is the fund-raising division of the Baptist Medical System and the board is composed of 24 individuals who have established trusts of \$100,000 or more to the foundation or given gifts of \$50,000.

The new medical advisor for the Washington County Advisory Council for Communities Home Health Care is **Dr. William J. McGowan**. Dr. McGowan is a family practitioner in Springdale. His duties as medical advisor include making suggestions, providing information to other physicians and being the medical community representative on the council.

Dr. Walter Jay, professor of ophthalmology, announced in a recent press release that the University of Arkansas for Medical Sciences' Department of Ophthalmology was one of 15 to receive a \$200,000 National Institutes of Health grant for the study of optic neuritis, an optic nerve disorder. Dr. Jay said that other participating centers include Duke University, Johns Hopkins and Baylor University.

Ben N. Saltzman, M.D., recently awarded special plaques to Vocational Industrial Clubs of America (VICA) fund-raising winners. The VICA Clubs exceeded its \$5,000 goal in its Christmas Seal Drive for the American Lung Association of Arkansas. Dr. Saltzman is a board

member of the association and handed out the awards to the first, second, and third place fundraisers at the Skill Olympics Banquet held at the Excelsior Hotel in Little Rock.

The Northeast Arkansas District Auxiliary group recently heard **Dr. Scott Fergus** discuss cancer and its cures at their day-long meeting. Dr. Fergus is the chief of surgery at the Mississippi County Hospital System's facility in Osceola.

The newest Fellow of the American Academy of Family Physicians is **Dr. Lawrence Travis**, a Fort Smith physician. Dr. Travis practices at the Holt-Krock Clinic and is a member of the Crawford County Medical Society.

The Mayor of DeWitt, John H. Schallhorn, set aside May 1, 1988 as "**Dr. John M. Hestir Day**", in honor of Dr. Hestir's election as president of the Arkansas Medical Society. In the proclamation, Mr. Schallhorn commended Dr. Hestir for his service to the community and people of DeWitt.

Dr. J. Y. Massey recently led an ophthalmology conference which was attended by physicians from Arkansas, Oklahoma, Missouri and Texas. The program topic was "Cataract Extraction by Phacoemulsification," and Dr. Massey, a Mountain Home ophthalmologist, served as the program director.

The Henderson State University Alumni Association recently honored **Tom Ed Townsend, M.D.**, as a distinguished alumni. Dr. Townsend, a Pine Bluff pediatrician, is a past president of the Arkansas Medical Society (1975-76) and the Jefferson County Medical Society as well as a former Council Chairman for the state society.

**If you know of someone in your town who has been honored in some way or who is performing a duty that we should know about - write us a letter or send the clipping.
We want our members to know WE CARE!**

NEW MEMBERS

ARKANSAS COUNTY MEDICAL SOCIETY

Wilson, Richard B., Pediatrics, Stuttgart. Born October 30, 1951, Pine Bluff. Pre-medical education, Hendrix College, Conway. Medical education, University of Arkansas for Medical Sciences, 1978. Internship/residency, Louisiana State University Medical Center. Practice experience, Batesville, 5 years; Stuttgart, 2 years. Board certified. Member, American Board of Pediatrics and American College of Emergency Physicians.

INDEPENDENCE COUNTY MEDICAL SOCIETY

Sloan, Fredric J., Ophthalmology, Batesville. Born December 18, 1948, Elmhurst, IL. Pre-medical education, Coe College, Cedar Rapids, IA, B.A., 1970. Medical education, University of Iowa, 1974. Internship, University of Iowa. Residency, University of South Florida, Tampa. Practice experience, 4 years, South Lake Tahoe, CA; 6 years, Batesville. Board certified, Ophthalmology. Member, AMA, American Academy of Ophthalmology.

JEFFERSON COUNTY MEDICAL SOCIETY

Pace, Rose A., General Medicine, Pine Bluff. Born December 10, 1946, Waynesboro, MS. Pre-medical education, AM & N, B.A., 1968 and Roosevelt University, M.A. Medical education, Chicago Medical School, 1978. Internship/residency, Martin Luther King, Jr. General Hospital. Practice experience, 7 years, Arkansas. Member, AMA, Arkansas Medical, Dental & Pharmaceutical Association.

LAWRENCE COUNTY MEDICAL SOCIETY

Langley, Michael G., General Surgery, Walnut Ridge. Born August 13, 1952, Camp Cooke, CA. Pre-medical education, Southern Illinois University, B.A., 1974. Medical education, Southern Illinois University School of Medicine, Carbondale, 1979. Residency, Good Samaritan Hospital, Cincinnati, OH. Practice experience, 2 years, Robinson, IL; 1 year, Walnut Ridge. Board certified, American Board of Surgery.

PHILLIPS COUNTY MEDICAL SOCIETY

Frederick, William R., Ophthalmology, Helena. Born July 23, 1952, Cleveland, MS. Pre-medical education, Delta State. Medical education, University of Missis-

sippi, Jackson, 1978. Internship/residency, University of Tennessee, Memphis. Practice experience, 5 years, Helena. Board certified, Fellow of American Academy of Ophthalmology. Member, Arkansas Ophthalmology Society.

POLK COUNTY MEDICAL SOCIETY

Finck, John H., Family Practice, Mena. Born March 16, 1957, Enid, OK. Pre-medical education, Louisiana Tech University and Louisiana State University, Shreveport, B.S., 1980. Medical education, Louisiana State University Medical Center, Shreveport, 1984. Internship, LSUMC. Residency, AHEC, Fort Smith. Board certified, American Academy of Family Physicians. Member, AAFP, AMA.

PULASKI COUNTY MEDICAL SOCIETY

Magie, Stephen K., Ophthalmology, Little Rock. Born August 31, 1953, Little Rock. Pre-medical education, University of Central Arkansas, Conway. Medical education, University of Arkansas for Medical Sciences, 1980. Internship/residency, University of Tennessee, Memphis, 1981; Louisiana State University Medical Center, Shreveport, 1981-84; Touro Infirmary, New Orleans, Retina Fellowship, 1984-85. Board certified, Ophthalmology. Member, Faulkner County Medical Society.

White, Jr., Faber A., Anesthesiology, Little Rock. Born May 29, 1948, Memphis, TN. Pre-medical education, Hendrix College, Conway, B.A., 1970. Medical education, University of Arkansas for Medical Sciences, 1974. Internship/residency, UAMS. Practice experience, 8 years, Little Rock. Board certified, Anesthesiology.

TRI-COUNTY MEDICAL SOCIETY

Jackson, George W., Internal Medicine, Cherokee Village. Born April 19, 1955, Itawamba County, MS. Pre-medical education, University of Tennessee, Knoxville, B.A., 1977. Medical education, University of Tennessee, Memphis, 1983. Internship/residency, Carraway Methodist Medical Center, Birmingham, AL. Board eligible.

WASHINGTON COUNTY MEDICAL SOCIETY

McAlister, Mitchell S., Obstetrics and Gynecology, Fayetteville. Born November 8, 1957; Chattanooga, TN.

Pre-medical education, University of Tennessee, Knoxville, B.A., 1979. Medical education, University of Tennessee, Memphis, 1983. Internship, Baptist Memorial Hospital, Memphis. Residency, University of Tennessee, Dept. of Ob/Gyn. Board eligible.

Rouse, Joe P., Family Practice, Fayetteville. Born April 11, 1945, Pine Bluff. Pre-medical education, University of Arkansas, B.S., 1968; B.A., 1970. Medical education, University of Arkansas for Medical Sciences, 1970. Internship, U. S. Naval Hospital, San Diego, CA. Residency, U.S. Naval Hospital, Jacksonville, FL. Military record, U.S. Navy, 1970-75. Practice experience, 13 years, Fayetteville. Board certified.

Woods, Elizabeth A., Obstetrics and Gynecology, Fayetteville. Born April 9, 1948, Iowa. Pre-medical

education, University of Iowa, B.S., 1975. Medical education, University of Iowa Medical College, Iowa City, 1981. Internship, Cedar Rapids Medical education Program. Residency, Southern Illinois School of Medicine, Springfield. Practice experience, 1 year, Decatur, IL; 1 year, Fayetteville. Board eligible. Member, Junior Fellow of ACOG.

RESIDENT MEMBERS

Kolb, David C. Born October 28, 1961, Little Rock. Pre-medical education, University of Arkansas, Fayetteville. Medical education, University of Arkansas for Medical Sciences, 1987. Internship, Methodist Hospital of Memphis, Memphis, TN. Residency, UAMS. Field of study, general surgery.

IN MEMORIAM

DR. JOHNNIE P. PRICE

Dr. Johnnie P. Price, aged 81, of Monticello, died May 2, 1988. He was a retired general practitioner.

Dr. Price was a former president of the state Board of Health, and was the chairman and a board member of Blue Cross and Blue Shield of Arkansas from 1972 to 1984. He had served on the board of the Monticello Chamber of Commerce and the Monticello County Club.

Dr. Price was a graduate of Arkansas A and M College (University of Arkansas, Monticello) and was a member of the Board of Trustees of the University from 1969 until 1974. He was a past president of the Mid-South Post-Graduate Medical Assembly in Memphis, TN as well as a Life member of the Arkansas Medical Society.

He is survived by his wife, Corinne Beasley Price; a daughter, Ann Porter Clark of Pine Bluff; and two grandchildren.

DR. LEWIS MURPHEY HENRY

Dr. Lewis Murphey Henry, a retired Fayetteville ophthalmologist, died May 5, 1988. He was 87.

Dr. Henry received his medical degree from the University of Tennessee and practiced in Ohio until moving to Fort Smith, opening a practice with his wife, the late Dr. Louise McGammon Henry. He moved to Fayettev-

ille in 1970 where he was in practice with his son, Dr. Morriss Henry.

He was a past president of the Sebastian County Medical Society and a Life member of the Arkansas Medical Society. He was also a member of the Fifty Year Club of the state society.

Dr. Henry served in the U. S. Army during World War I and was a flight surgeon for the U. S. Air Force during World War II.

Survivors are his two sons, Dr. Morriss Murphey Henry of Fayetteville, Dr. Herbert Henry of Bishop, GA; two sisters, Aubrey G. Walton of Little Rock and Mrs. Charles Partee of Pittsburgh; and five grandchildren.

DR. LOUIS A. DRAEGER

Louis A. Draeger, a retired Danville general practitioner, died Saturday, May 14, 1988. He was 88.

Dr. Draeger was an Emeritus member of the Arkansas Medical Society as well as a member of the Pope and Yell County Medical Societies. He was a 50-year member of the American Medical Association and a member of the Fifty Year Club of the Arkansas Medical Society.

Dr. Draeger is survived by two daughters, Marilyn Bradley of Danville and Betty Lou Habern of California; three grandchildren and three great-grandchildren.

Memorials honoring Arkansas Medical Society members and their families can be made to the Medical Education Foundation for Arkansas (MEFFA), Post Office Box 5776, Little Rock, Arkansas 72215.

There are three million Americans alive today who have had cancer. And now one out of two cancer patients get well!

*"Three million strong all across this land
We saved their lives working hand in hand
We're proud, oh, we're proud
We helped three million
Live anew!
While we can think
While we can talk
While we can stand
While we can walk
While we can fight
While we can give
Join our quest for life
Right now!"



Leslie Uggams, Honorary National
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Join us with your
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AMERICAN
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Years of Life!

Join us

*Special lyrics sung by Leslie Uggams
to the tune of "If I Can Dream"
(Original words and music by W. Earl Brown)

AIDS 1988

Colonel R. Neal Boswell, M.D.*

Introduction

"I don't know if AIDS is a good talk for a dinner audience, but we'll see. Thank you Dr. Fournier for that introduction. I'd like to present a lot of information on AIDS today both from the standpoint of immunology of the disease and the demographics of the disease. I think the United States military has a unique set of information because we in the Department of Defense have the only mandatory serologic screening program in the world. As of this month [April], we have probably screened 95-98% of the active duty United States Air Force, and also the Navy and the Army. So, we are up around two million persons screened. Nobody else has that type of data.

Before I start, I just wanted to say that even though I will give you a lot of information about AIDS today, I'd like for you not to leave with the impression that I'm either a Yankee since I trained in New York and Massachusetts, or a Texan since I come from San Antonio. I'm sure you'll be comfortable with my accent.

We've learned a lot about the Human Immunodeficiency Virus (HIV). As you know, there has been a change in nomenclature over the last several years from the initial two or three names that were ascribed to this virus by the independent investigators. We now talk about Human Immunodeficiency Virus (HIV), and I will use that term today. I will talk about HIV I and a little about HIV II. If you read the medical literature, you will get used to talking about HIV I, HIV II, and maybe HIV III in the future. I'll explain some of the reasons why that is the case.

In June of 1981, two articles in the *New England Journal of Medicine* reporting epidemics of pneumocystis pneumonia (PCP) and severe immunodeficiency among homosexual males in New York and San Francisco were published. These articles were the first to document the

clinical consequences of infection from a heretofore unknown agent. These observations, and others that have followed, have changed the practice of medicine. They both have had and will have an impact on medicine and mankind for decades to come. This paper will discuss the HIV virus and its impact on infected individuals with specific emphasis on its effect in the United States military. It will be divided for clarity as follows:

- I. Nomenclature, structure, replication, and structure-function relationships;
- II. Serologic testing, and the host immune response;
- III. Epidemiology and clinical staging;
- IV. Clinical presentation;
- V. Transmission, prevention, and infection control guidelines;
- VI. Impact on the military of the United States, United States Air Force demographic data, summary;
- VII. Clinical manifestations of HIV infection.
 - A. Kaposi's sarcoma
 - B. AIDS enteritis
 - C. The AIDS dementia complex
- VIII. General summary and the future of the United States military HIV program.

Nomenclature, Structure, Replication and Structure Function Relationships

Although the clinical syndrome of AIDS was described in 1981, it was not until two years later that scientists in France and in the United States had the putative agent identified. In the fall of 1983, a group at the Pasteur Institute in Paris identified, without being able to grow in tissue culture, an RNA virus as being associated with AIDS. This work was confirmed and expanded by a group at the National Institutes of Health in the spring of 1984 with the virus being grown in tissue culture in a malignant human T cell line. Previous attempts to control the replication of this virus in human cell lines had failed because the virus grew only in cells that expressed the

* Dr. Boswell was the featured speaker at the Joint Specialty Luncheon of the AMS Annual Session. He is an Air Force colonel at Lackland Air Force Base, Texas.

CD4 cell surface molecule, that is, the helper T cell lymphocyte surface receptor and surface molecule. The virus had been cytopathic in all prior cell lines tested.

Almost simultaneously, the Pasteur Institute group and a group at the University of California in San Francisco found other cell lines in which this RNA virus could be replicated without cytopathy. Each group, as is common, named their virus. The Pasteur Institute group called the virus lymphadenopathy associated virus or LAV. The NIH group called the virus HTLVIII for human T cell lymphotropic virus type III, and the University of California group called their virus ARV or AIDS related virus. By consensus, all these viruses are now called HIV or human immunodeficiency virus, and several strains of this virus have now been sequenced (i.e. HIV I, HIV II, etc).

In introducing HIV, it is also important to discuss or introduce a number of other terms which relate either to the clinical presentation of this viral infection in specific patients, or to the tests that have been developed to define infectivity with this virus. Early in the studies of HIV viral infection, it became obvious that not every patient presented with AIDS or even developed AIDS. In fact, it became obviously necessary to carefully define AIDS in order to rule out non-HIV related immunodeficiency and to identify those patients who had not yet progressed to end stage immunodeficiency clinically as 1) infection with an opportunistic organism, 2) the presence of a malignancy specifically associated with HIV infection or, 3) the presence of a wasting syndrome known as "Slim disease" or presenting as "the AIDS dementia complex".

Patients who do not fit the case definition of AIDS have been designated as having "AIDS prodrome" or "AIDS related complex (ARC) or the lymphadenopathic syndrome". These conditions, which are all temporarily pre-AIDS, can last for months or many years and will be defined below when the clinical syndrome is discussed.

The exact origin of HIV has not clearly been defined, nor is it clear when HIV began to spread widely among humans. It is fairly certain however, that this retrovirus existed endemically at least for some decades if not much longer in central or east Africa. HIV I is found with a high incidence in those countries surrounding Lake Victoria. HIV II has the highest prevalence in west Africa and areas of overlap (that is where both viruses are seen either with high incidence or low incidence) have been defined. Because of insufficient data, large areas of Africa remain untested for incidence or prevalence of either virus at this time.

HIV is a human retrovirus or RNA virus that has a RNA sequence distinct from, but similar to other vertebrate retroviruses. It is beyond the scope of this paper to discuss in depth the molecular structure of this RNA virus, but a brief discussion will facilitate an understanding of both the structure-function relationships of this virus and the serologic testing that has been developed to de-

fine infectivity in humans. If one stretches out the genome of the HIV virus a number of exons can be defined that code for specific viral related proteins and give this virus its unique structure. The gag region of the HIV genome codes for the core protein, a 55,000 molecular weight (p 55) protein which has identifiable subunits of which a 24,000 molecular weight protein (p 24) is antigenically the most important. The envelope proteins are also antigenically important. The envelope portion of the HIV genome is known to code for 160,000 molecular weight glycoprotein (gp 160). The subunits of gp 160 include a 120,000 molecular weight glycoprotein (gp 120) and a 41,000 molecular weight glycoprotein (gp 41) that make up the protein coat of HIV virus.

You can think about these proteins as we do with hepatitis B (i.e. hepatitis B surface antigen, hepatitis B antigen and hepatitis B core antigen) since this is somewhat analogous. Hepatitis B is a DNA virus instead of a RNA virus. The HIV virus, although distinct in its RNA sequence, shares many similarities with other known retroviruses including the Rouse Sarcoma virus, the first RNA virus associated with malignancy, and the bovine leukemia virus. HTLV 1, a retrovirus associated with B lymphocyte malignancies that is endemic to southern Japan and the Caribbean, and HTLV II, which probably also causes a B lymphocyte malignancy, are also very similar in terms of structure to HIV.

All RNA viruses described to date have a protein coat that is antigenically and structurally distinct; a lipid membrane bi-layer that is taken from the host cell and a core protein that surrounds the viral RNA and the enzyme reverse transcriptase that is necessary for replication.

If one juxtaposes a model of the HIV genome displayed linearly with a model of the intact virus, one can easily see that the gag and envelope regions of the viral genome code for the antigenic structures on the surface of the virus and for the core protein which surrounds the RNA. gp 120 projects from the surface of the virus and is attached to the hydrophobic gp 41, which is embedded in the lipid membrane. 24, the core protein, surrounds the RNA/reverse-transcriptase complex within the center of the virus and on electronmicroscopy forms a dense plate-like nucleus.

It's interesting that there are at least three exons that code for proteins in this virus that down regulate the expression of this virus - sor, tat, and 3'orf. That is, these proteins have the ability to prevent or hinder proliferation of this virus in cell systems. The significance of this is not known, but it is interesting to speculate about this teleologically.

The HIV virus, like the DNA influenza virus, has the capability to evolve by structural changes through amino acid substitutions in both the gp 120 portion of the envelope protein and within the intramembranous gp 41 portion of the envelope protein. gp 41 is more highly conserved (that is, much less subject to structural altera-

tion over time) than is gp 120, although there are portions of the gp 120 molecule that are likewise highly conserved. Significant substitution in the amino acid sequence structure of the envelope proteins alter the antigenicity of these proteins to such an extent that they, like influenza proteins, become different. Thus, vaccine development and even the serologic definition of infectivity will be quite difficult.

HIV replicates as do other retroviruses in the following way. The gp 120 binds avidly to CD4, the T helper lymphocyte defining surface protein or receptor. Teleologically this affinity between the HIV envelope protein and the helper cell receptor was probably necessary for infectivity in human cell populations. It is not clear that HIV can bind to or infect cells that do not bear the CD4 protein, but CD4 is not exclusively a receptor of helper cells. It has a higher density on helper cells, but the CD4 molecule is also present on macrophages. I will talk about macrophages later because they may be one of the most important cells infected by this virus. CD4 is also present on other antigen processing cells.

The most important from our area of research is the microglia cell, a cell within the central nervous system that is not of nervous or neuronal origin. In fact, it is the equivalent of a tissue macrophage such as the dendritic cell in the skin, of the dendritic cell within lymph nodes, or the equivalent of the pulmonary macrophage. It is a resting macrophage of bone marrow origin. The microglial cell also has the CD4 molecule on its surface, and therefore, can be infected by the HIV virus. It is not at all clear that any cells of primary neuronal origin have the CD4 molecule on their surface, or clear that neuronal cells of central nervous system tissue origin per se can, in fact, be infected by this virus.

That raises very interesting questions about the pathogenesis of the central nervous system's involvement in this disease and is undoubtedly very important. It is becoming clear that direct invasion or direct toxicity to neuronal cells by this virus itself may not be necessary for CNS impairment. Following the CD4 receptor mediated binding, the viral particle is incorporated or endocytosed. Enzymes within the endocytosing cell uncoat the virus. The viral RNA, in the presence of the enzyme reverse transcriptase and using host cell nucleic acids, produces a linearly arranged DNA copy of the viral RNA. Host cell enzymes (RNase's) in the cell cytoplasm digest the RNA, and single stranded DNA is paired with another DNA strand. Ultimately, a circular complementary DNA is produced. This circular DNA migrates to the nucleus of the host cell and is inserted within the host DNA becoming a template for the production of RNA, including messenger RNA which is transcribed in the cytoplasm to produce the viral proteins for which it codes. These include the envelope proteins gp 120 and gp 41, the gag protein p 24 and the viral reverse transcriptase. With the presence now in the cytoplasm of host transcribed viral

RNA, reverse transcriptase, and the viral proteins, infective viral particles can be reassembled at the host cell membrane and bud off as intact replicative virus.

However, a quiescent phase following the incorporation of viral complementary DNA within the host DNA has been described in vitro, and at least in vitro an activation step is necessary for the so-called replicative burst. This replicative burst in vitro has been associated with co-infection with other viruses (CMV, hepatitis B, EBV, etc) or with immunologic stimulation of the infected cells. It has been equated at least hypothetically to clinical progression of disease.

Once the virus with its characteristic proteins, reverse transcriptases and RNA is reassembled on the surface of the cell, it can be shown electronmicroscopically to bud off in a fashion similar to the budding of most other viruses. The three human retroviruses, HTLV I, HTLV II, and HIV are all associated with the clumping in vivo and in vitro of infected cells into structures that are called syncytia. These are essentially giant multinucleated cells and the development of these syncytia may be partially responsible for the cytopathic effect of HIV. Additionally, the human retroviruses (HTLV I, HTLV II, and HIV) bud from the surface of the host cell in a similar fashion, but on electron microscopic evaluation have characteristic morphologic appearances.

Other potential explanations for the decline in T-helper lymphocytes numbers which occurs in HIV infected patients prior to the development of AIDS have also been proposed and include:

- 1) Direct cell death due to the cytopathic effects of the virus
- 2) The presence of a viral protein or induced suppressor factor that inhibits or prevents proliferation of lymphocytes including T helper lymphocytes.
- 3) The loss of T cell dependent B lymphocyte function (that is antibody production) that occurs following T helper cell death and the failure T cell associated lymphokine production including interleukin 2 and gamma interferon.

Although it was the Pasteur Institute in Paris that first identified the putative infectious agent in AIDS as a retrovirus, it was the group at the NIH in Bethesda who in April of 1984 developed and reported the capability of growing the HIV virus in a permissive human malignant T cell line. Additionally, it was this step, that is the ability to grow the HIV virus in a cell culture system with the production of large amounts of viral protein, but without the death of the cell line, that set the stage over the next year for the development of tests to serologically define infectivity. The same viral proteins cited above (i.e. gp 120, gp 41, p 55, and p 24) when available in large amounts could be used to identify antibody in the sera of infected patients, therefore defining infection.

Serologic Testing, and the Host Immune Response

The existence of immunoglobulin sandwich technique assays such as radioimmunoassays and ELISA's (enzyme linked immunosorbant assay) were quickly adapted to produce a sensitive and reliable antibody screening test. The ELISA assay incorporates a color change in the test solution rather than the binding of a radio labeled compound and can be read either visually or spectrophotometrically. Simply described, the unseparated viral proteins (in this case the envelope, gag, and other HIV proteins) are bound to a solid phase substrate (latex bead, plastic bead, precoated to the bottom of a plastic test tube, etc.), and the patient's serum is added. Antibody directed to the specific viral antigens (proteins) binds and superfluous antibody is removed with a wash step.

Next, goat antihuman immunoglobulin tagged with an enzyme such as peroxidase or others is added and if human immunoglobulin has bound to the viral protein, the goat antihuman immunoglobulin binds likewise. A second wash step is added. A colorless substrate for the antibody bound enzyme is added, and color produced that can be quantitated and correlates with the amount of bound enzyme.

The HIV ELISA assay was developed by a number of commercial manufacturers and released in the spring of 1985 for the screening of all transfused blood or blood products in the United States and in many other countries. Its exquisite sensitivity makes it an ideal agent for such large scale screening, but it was very quickly found to be associated with a significant incidence of false positivity, particularly in low risk populations. Therefore, at the present time it is used for screening purposes only and definitive definition of HIV infection has been relegated to other immunoassays, including the Western Blot. However, improved products are already available for general use within the United States that marry the sensitivity of the ELISA assay with the specificity of the Western Blot.

The Western Blot is exquisitely specific and can distinguish HIV I from HIV II. Although exacting, cumbersome, and time consuming, Western Blot technologically has been available in a research setting for at least a decade. Simply described, the viral proteins previously discussed are electrophoresed in a gel and separated out on the basis of molecular size and charge. After electrophoresis, they are absorbed on cellulose nitrate paper that can be cut into strips. These strips are bathed in the patient's sera and developed by any of a number of techniques.

Development renders identifiable antigen antibody complexes in specific locations within the strip that, using standards, can be identified as anti gp 120, anti p 55, anti gp 41, anti p 24, etc. Occasionally false negative Western Blots occur, but with the sensitivity of the ELISAs and

the specificity of the Western Blots, only rarely do patients who have been infected not get identified.

One of the circumstances where an infected patient might not be identified would be early in the course of infection. Following infection, often simultaneous with a flu-like or infectious mononucleosis-like illness that can last up to four to six weeks, individual patients can be shown to have HIV viral proteins (antigens) within their serum. This is analogous to having hepatitis B surface antigen free within the serum prior to the development of anti HBs. This window of serologic negativity is generally felt to be approximately four to six weeks long at which time the infected host begins to produce antibodies that can be detected by the ELISA assay, the Western Blot, or other immunoassays.

The most important antibodies produced for testing purposes are antibodies against p 24 and antibodies against the envelope gp 41 and gp 120. With the production of these antibodies, the free viral proteins either disappear from the serum, exist in such small quantities that they are infrequently detected, or are bound within immune complexes and removed by the reticulo-endothelial system. Patients may remain with detectable amounts of anti HIV antibody against the envelope and core proteins for extended periods of time (up to and including many years). A few patients have now been shown to lose over time the antibody to the HIV core protein p 24 with the simultaneous reappearance of free p 24 in the serum. This may ultimately become a marker for progression of disease. At the present time, it is being looked at as an opportune time to initiate therapy if and when effective therapy becomes available.

Although assays are available that could be applied to large scale screening of populations (such as in pregnant women, sexually transmitted disease clinics, etc.), issues of informed consent and confidentiality have blocked large scale screening within the United States except on a voluntary basis. The United States Department of Defense, however, has initiated a number of non-voluntary serologic screens to prevent previously infected individuals from enlisting in the military and to define the prevalence and incidence of infectivity within the active duty service population. The results of these studies will be discussed in detail later in this talk.

In the private sector, however, testing is done only on a voluntary basis and if done, must be confirmed by a specific assay such as the Western Blot. If an individual tests positive, he is referred to a/his physician for evaluation and encouraged to identify sexual contacts for testing. At this time, the patient should also be counseled about how to limit spread of this infection, etc. A positive HIV antibody test indicates exposure only. It does not indicate when or where exposure occurred, nor does it have any specific prognostic implications at this point.

Epidemiology and Clinical Staging

Cumulative numbers of cases of AIDS in the United States are approaching 60,000 since 1981. Among those patients diagnosed as having AIDS, over half are currently deceased with a case mortality rate approaching 80% at two years after diagnosis. Patients simply identified on screening of having been infected are not currently reported within the United States, but extrapolation from clinical data, including data obtained from United States military when testing potential recruits, would suggest that in some areas of the United States, the incidence of infection approaches five per 1000 in the 17-25 year age group. Such alarming incidence data, however, is confined primarily to a few specific geographic areas such as a Washington, D.C. to Boston corridor with an epicenter in Manhattan, metropolitan Miami, New Orleans, Houston, Los Angeles, and the San Francisco Bay area.

The incidence of seropositivity to HIV is such within the rest of the United States to suggest that at the present time, this epidemic has the following characteristics 1) it is urban, not rural; 2) it was probably introduced virtually simultaneously on the respective United States coasts among high risk individuals in the late 1970's; 3) it is almost exclusively spread sexually, by the sharing of needles among IV drug abusers and previously through the transfusion of blood or blood products; 4) spread among high risk individuals can and has been shown to decrease with education about risk factors, safe sex, etc., and; 5) sexual promiscuity, or the use of illegal drugs with needle sharing, will probably be the best target for the decrease in the spread of this disease.

As eluded to earlier, AIDS is only the end result of HIV infection in some, but not all patients to date. Although the case definition for AIDS has changed many times since 1981 and has become much too lengthy and cumbersome to specifically go over in this paper, a simple case definition is available. The Centers for Disease Control uses the following case definition (1986):

A reliably diagnosed disease at least moderately indicative of an underlying cellular immunity; no known disease of underlying cellular immunodeficiency or any other reduced resistance reported to be associated with that disease.

Additionally, the CDC has developed a classification of HIV disease which I find currently cumbersome, but is included for completeness in Table I.

Many other classifications have been developed, including a very useful clinical classification developed at Walter Reed Army Institute of Research in 1985. It was called the Walter Reed Staging System and was published in the January 6, 1986 issue of the *New England Journal of Medicine*. The Walter Reed Staging System has been used by the United States Department of De-

Table I. Classification for HIV Disease (CDC)

Group I	Acute Infection
Group II	Asymptomatic Infection
Group III	Persistent Generalized lymphadenopathy;
Group IV	Other Disease
a.	Constitutional Disease,
b.	Neurologic Disease,
c.	Secondary Infectious Disease,
d.	Secondary cancers,
e.	Other Conditions

fense for epidemiologic purposes and unofficially for return to duty or medical retirement decisions.

The Walter Reed Staging System has seven potential classification designations: Walter Reed zero defined by antibody negativity, the absence of general lymphadenopathy, the presence of more than 400 absolute T helper lymphocytes per cubic millimeter, the presence of normal cutaneous responsiveness to delayed hypersensitivity antigens such as PPD, mumps, tetanus toxoid, trichophyton and *Candida* and the absence of thrush and/or optimistic infections.

Walter Reed I patients are HIV antibody positive but otherwise meet all the normal criteria listed above for Walter Reed zero. Walter Reed II patients are antibody positive and have persistent lymphadenopathy, defined as nodes of more than one centimeter in diameter for longer than three months in more than two locations exclusive of the groin. Walter Reed II patients have greater than 400 absolute T helper lymphocytes per cubic millimeter and are not anergic.

Walter Reed III patients are antibody positive and may or may not have lymphadenopathy (it should be noted that not everyone develops lymphadenopathy, and that even in those who do develop lymphadenopathy, it may not necessarily persist). However, they have fewer than 400 absolute helper lymphocytes per cubic millimeter, but are not anergic.

Walter Reed IV patients have been described as having partial anergy; that is, only one of four or five skin tests are positive, suggesting impairment of the immune system. Additionally, they are HIV antibody positive, may or may not have had lymphadenopathy and do not have thrush or opportunistic infections (I have found the concept of partial anergy difficult to understand and the Walter Reed IV clinical classification definition of little help).

Walter Reed V patients are antibody positive, may or may not have lymphadenopathy, have less than 400 T helper lymphocytes per cubic millimeter and are anergic or have thrush (it should be noted that the presence of thrush or oral mucosal candidiasis is associated with a worsening prognosis and is a predictor of progression to

AIDS). Walter Reed VI is frank AIDS defined by the presence of an opportunistic infection, one of the malignancies associated with AIDS or other AIDS defining clinical manifestations. Virtually all Walter Reed VI's will be anergic and will have fewer than 400 T helper lymphocytes per cubic millimeter.

Demographic data is unreliable relative to the number of AIDS cases reported worldwide. The reasons for this are multifactorial and include the sensitivity of individual countries to release of that data, the lack of availability of significant reporting mechanisms, the lack of large scale screening programs to identify incidence of infectivity or incidence of AIDS, and lastly, the availability of either a commitment to screening or the technical expertise to screen for incidence/prevalence. However, where testing and reporting have been done, it is obvious that at the present time, HIV infection or AIDS represents a worldwide problem. Although few cases have been reported from China, the virus is present without question in virtually all other continents and countries.

Prevalence of infection is clearly less defined than numbers of cases of AIDS, and although the two are inter-related, that is, the latter is a predictor of the former, the exact relationship between the two is unclear. It can, however, be said that in east central and west Africa, the epidemic is a human disaster on a grand scale. Additionally, within high risk groups, among intravenous drug users, among prostitutes, and among the urban socioeconomically disadvantaged members of major developed countries, it is approaching disastrous proportions. Among the urban poor in less developed countries outside of Africa, little incidence or prevalence data is available. Most available data suggests that the problem, although undefined, is growing. Reliable information from South America and Central America is sparse, but cases of AIDS have been reported from virtually all countries and the spread of the disease is assumed to already be extensive.

Clinical Presentations

The clinical manifestations of HIV disease are myriad and have been widely reported. For purposes of this talk, I will touch on this briefly and predominantly in an organ specific fashion. I will discuss the central nervous system manifestations of HIV disease in detail, both because of its profound implications, as well as to share research data obtained at Wilford Hall USAF Medical Center that has implications for the prevalence of central nervous system involvement. AIDS is a disease in adults of cell mediated immunity. In children, it is a disease of mixed cellular and antibody deficiency.

The reasons for this are apparently that the antigen specific cellular response of the immune system is so abnormal in children that they are never capable of making antibodies to many antigens to which they are exposed in early life. Normal children will be exposed to numerous

bacteria such as *H. influenza* and *S. pneumonia* and will make antibodies against them readily.

Children with Pediatric AIDS or PAIDS do not make antibodies to these common pathogens when they are exposed to them. Subsequently, their big problems are common respiratory bacterial infections. They respond somewhat to intravenous gamma globulin given on a longitudinal basis. Adults do not respond to IV gamma globulin and do not need replacement. HIV infected adults make antibodies spontaneously to antigens that they have previously seen and they make them in great but often clinically irrelevant quantities.

The opportunistic infections in adults with AIDS include mycobacterial, viral, protozoan, etc. Infections with tuberculosis and mycobacterium avian intercellulare, an atypical mycobacterium uncommonly seen in non-immunosuppressed patients, are significant problems. Neurologic infections include those with toxoplasma gondii, cryptococcal meningitis, CMV encephalomyelitis and progressive multifocal leukoencephalopathy due to the Jacob Crutzfield and papova viruses. Fungal infections include those due to candida, particularly candida esophagitis, candida enteritis, candida pneumonitis and disseminated candidiasis. Herpes esophagitis and cytomegalovirus enteritis also occur in significant numbers of patients, and as with many infections associated with this syndrome, are refractory to therapy.

The predominant organism associated with a pulmonary presentation in the northern hemisphere in this syndrome is pneumocystis carinii. Since much has been written about this organism, pneumocystis carinii pneumonia will not be discussed further. Cytomegalovirus pneumonia and pneumonia secondary to mycobacterium avian intercellulare also occur frequently and, if untreated, are uniformly fatal. Even when treated, however, all of the above three major pulmonary pathogens in this disease carry marked increased morbidity and/or mortality. The upper and lower gastrointestinal tract in HIV associated syndrome/AIDS have been associated with chronic cryptosporidiosis, recurrent disseminated salmonellosis and infections with isospora.

A number of neoplasms, including squamous cell carcinoma of the anal-rectal region, multiple basal cell carcinomas, both Hodgkins and non-Hodgkins lymphomas (especially central nervous system lymphoma) and Kaposi's sarcoma have been reported. Most of these malignancies have been associated with a poor response to therapy, and the lymphomas specifically have often been histopathologically unusual, such as angioimmunoblastic, Burkett's type, or other primitive anaplastic poorly differentiated histopathologic forms.

A plethora of laboratory abnormalities have been described in patients with the HIV associated syndrome/AIDS. Cutaneous anergy (failure to respond to subcutaneous recall hypersensitivity antigens) occurs in the late stages of HIV infection in virtually all patients. A poly-

clonal gammopathy with normal to low IgM; high, often profoundly elevated serum IgG; and high serum IgA is seen in most patients. The increase in serum IgG appears to occur early and to be a non-specific response. This increased serum IgG may be secondary to non-specific B cell proliferation and immunoglobulin production, and may be unassociated with an appropriate immune response to antigenic stimulation. That is, it may be non-sense antibody spontaneously and polyclonally produced that, although protective in adults may not be useful in defining current infection for serologic purposes.

It is unclear if patients infected with HIV mount an appropriate or protective antibody response to vaccinations. Exactly how one should approach (from the standpoint of immunizations) patients affected with the HIV virus remains to be sorted out, but it is currently recommended that children infected in utero or adults who are in the late stages of disease progression should clearly not be immunized with live viruses. There does, however, appear to be little risk (although not guaranteed protective benefits) from immunizing with standard killed virus vaccine. We have published from Wilford Hall USAF Medical Center a sequential and exponential increase in serum IgA in patients that correlates with progression of disease as defined by the Walter Reed Clinical Staging Classification above Walter Reed II.

Studies are currently ongoing to use serum IgA as an additional predictor of disease progression. Since most patients in the United States, including patients identified in the United States Department of Defense mandatory screening programs, belong in the classically described high risk groups (homosexual males, bi-sexual males, former or current IV drug abusers, recipients of blood transfusions or blood products, or sexually promiscuous females) serologic evidence of multiple sexually transmitted diseases is commonly seen. This includes serologic evidence of infection with hepatitis A, hepatitis B, syphilis, Epstein Barr virus and cytomegalovirus. Virtually 100% of HIV infected patients in the United States and in the United States Air Force study have been previously infected with Epstein Barr virus.

We have identified only nine percent of our patient population as being serologically naive to cytomegalovirus. We have identified a significant number of patients whose syphilis serology suggest either untreated or inadequately treated syphilis, both systemic and CNS syphilis. Other laboratory abnormalities commonly seen in patients infected with the HIV virus include an altered or low helper lymphocyte to suppressor lymphocyte ratio, (HS ratio = .85 to 2.5 normally) low numbers of absolute T helper lymphocytes (normal absolute T helper lymphocytes = 550 to 2000 per cubic millimeter) and impaired in vitro peripheral blood lymphocyte responsiveness to both mitogens (PHA, Con-A and poke weed mitogen) and specific antigens (candida albicans, tetanus toxoid, etc).

Skin lesions have been associated with the HIV associated syndrome/AIDS, some with prognostic significance. They include: herpes zoster, recurrent herpes zoster (particularly a multidermatomal and scarring variety); disseminated herpes simplex (both HS type 1 and HS type 2); diffuse molluscum contagiosum; diffuse warts; seboreic dermatitis (which has been associated with other autoimmune and/or immunodeficiency diseases); oral hairy leukoplakia (associated with Epstein Barr virus and noted to be a prognosticator of disease progression); and cutaneous and mucosal candidiasis as previously discussed.

Transmission, Presentation, and Infection Control Guidelines

Much has been written and is known about the transmission of the HIV virus. Although it has been predominantly spread, at least in the industrially developed countries, among homosexuals (as supported by demographic data from numerous countries), the route of transmission in less industrially advanced countries/populations may be predominantly heterosexual. The eight/nine to one male to female ratio in the United States is quite different from the almost one to one incidence of AIDS in east central and central Africa. The actual reasons for this discrepancy are not clear, but may in fact relate to other endemic diseases such as chlamydia, gonorrhea, syphilis, or others and/or cultural practices.

Without question, however, it is quite clear that this virus can be spread through both homosexual and heterosexual contact from males to sexual partners and heterosexually from females to male partners. The efficiency of transmission, at least in the United States, from female to male appears to be somewhat less (female sexual partners of males with AIDS in the United States have a 40-45% incidence of sero positivity to the HIV virus. Whereas male sexual partners of females with AIDS in the United States have only a 25-30% incidence of HIV sero positivity).

Much has been written about the transmission of the HIV virus by transfusion of blood or blood products. In countries where blood and blood products are routinely tested by the screening ELISA, the incidence of transmission via this route is at the present time negligible. Real or hypothetical exceptions to this include patients in the antibody negative four to six week "window of infectivity", a rare patient who is shown to be infected without the production of antibody, and with transmission of HIV II which is not detected by the HIV I screening ELISA.

This is not, however, a casually transmitted virus. Within the United States, there is no increased incidence of HIV seropositivity among household contacts of patients with AIDS or who are HIV antibody positive. Additionally, less than ten cases exist of virtual certain transmission of the HIV virus to health care or laboratory workers within the United States. The CDC in Atlanta is

AIDS IN ARKANSAS 1988

January 1 - June 17, 1988

Total number of cases reported		47	CASES BY AGE GROUP	
Number of deaths		16	Less than 20	0
CASES BY SEX			20 - 29	16
			30 - 39	20
			40 - 49	6
			50 - 59	1
			60 or more	4
Male	42			
Female	5			
CASES BY RACE			OPPORTUNISTIC DISEASE	
White	34		Pneumocystic Carinii	22
Black	13		Kaposi's Sarcoma	2
CASES BY RISK GROUP			Pneumocystis Carinii and Kaposi's Sarcoma	2
			Other	21
Homosexual/Bisexual*	28			
IV Drug User	2			
Hemophiliac	0			
Transfusion	5			
Heterosexual	1			
NIR#	4			

* Out of the 28 homosexual/bisexuals, seven are/were IV drug users

No identified risk group (NIR)

AIDS IN ARKANSAS 1985 - 1988

Total number of cases reported		137	CASES BY AGE GROUP	
Number of deaths		73	Less than 20	0
CASES BY SEX			20 - 29	47
			30 - 39	58
			40 - 49	22
			50 - 59	4
			60 or more	6
Male	127			
Female	10			
CASES BY RACE			OPPORTUNISTIC DISEASE	
White	107		Pneumocystic Carinii	68
Black	30		Kaposi's Sarcoma	6
CASES BY RISK GROUP			Pneumocystis Carinii and Kaposi's Sarcoma	5
			Other	58
Homosexual/Bisexual*	83			
IV Drug User	15			
Hemophiliac	0			
Transfusion	7			
Heterosexual	5			
NIR#	4			

* Out of the 83 homosexual/bisexuals, 23 are/were IV drug users

No identified risk group (NIR)

tracking thousands of patients following needle stick exposure, and I am aware of only one or two in the United States at this point associated with transmission via that route. In general, transmission appears to be more efficient from male via anal intercourse to male and male via vaginal intercourse to females, but in areas of high endemicity, this may ultimately mean very little.

Clearly, this epidemic will have major impact on all third world nations. There are already areas of the world where up to 50% or more of tested prostitutes are positive and where as much as 10% of the heterosexual male population has already been infected. In the United States, a high percentage of prostitutes in areas where prostitution and IV drug abuse occur in tandem also appear to have already been infected.

Prevention of spread of the HIV virus will undoubtedly prove to be very difficult. Blood donor testing to prevent the spread of the virus via transfusion of blood or blood products will help and has already had a major impact in countries where that practice has been instituted. The use of autologous transfusions for elective surgery or the use of low risk directed blood donors has also been introduced, or is being explored. The use of heat treated coagulation factors for severe hemophilia types A and B or single unit replacement for patients with mild hemophilia should prevent the spread of the HIV virus among patients requiring blood product replacement.

Since up to 50-60% of all infants born of HIV infected mothers develop evidence of either interuterine infection on serologic testing or develop pediatric acquired immune deficiency syndrome, routine testing of pregnant women in the early trimester has been recommended by some. Mothers infected with the HIV virus have also been counseled against pregnancy due to the inordinate risk of infection defined in neonates. Safe sex or abstinence with emphasis on multiple partner sex and promiscuity will remain the major effective prevention technique probably for the next several decades. Adults, teenagers, and children approaching puberty should be educated along with high risk populations and military populations, especially military populations traveling to areas of high HIV infection incidence or prevalence.

The use of condoms for "safe" sex and the avoidance of oral sex and "wet" oral/oral contact have been advocated. The HIV virus has been cultured from tears, saliva, breast milk, semen, vaginal secretions, and feces. The exact risk or incidence of infection from this exposure has not been specifically defined. Without question, however, sexual transmission almost certainly remains the most important mode of transmission, and education about the sexual transmission of HIV virus should be the cornerstone of any effort to halt the spread of this disease.

Well known guidelines published to prevent the spread of hepatitis B among health care workers appear to be more than adequate to prevent transmission in the

hospital environments. Blood and body secretion precautions are well defined and should be instituted and adhered to assiduously. If you can prevent hospital and clinic hepatitis B transmission, health care workers should be safe from AIDS. Physicians should avoid the use of blood transfusions or the use of blood products if possible. It has been recommended that all blood or blood products be tested using the HIV ELISA screening assay prior to their use.

Avoidance of sexual contact with infected individuals in conjunction with sex education for everyone is the ideal. Voluntary or even mandatory testing for HIV antibody seropositivity among high risk patients, military recruits, during visits to sexually transmitted disease clinics, prior to elective surgery, hospitalization, or dental care are currently topics of wide discussion within the United States and elsewhere.

Impact on the Military in the United States U.S. Air Force Data Summary

Wilford Hall is the United States Air Force's flagship teaching hospital with an average daily census of 750 patients. Because of the size of Wilford Hall and its graduate medical education tradition with both a strong infectious diseases service and sophisticated laboratory immunologic capability, Wilford Hall was tasked in April, 1983 to see and evaluate all HIV positive active duty U.S. Air Force members. Care is also provided for dependents and dependent retired. Since that time, the Immunology and Infectious Diseases services have evaluated over 700 patients with AIDS/ARC/lymphadenopathic syndrome or asymptomatic HIV infection.

In June, 1985, the Wilford Hall blood donor center which provides approximately 60% of all the U.S. Air Force's blood or blood products (approximately 60,000 blood transfusions per year) instituted HIV screening using the ELISA technique. This was done simultaneously with mandatory testing of all blood donors within the United States. Since the blood donations are primarily obtained voluntarily from U.S. Air Force recruits, those recruits who tested positive on blood donor screening and who were confirmed positive using the HIV Western Blot were discharged from basic training by DoD directive. HIV infection is considered disqualifying for enlistment.

In October, 1985, the United States Air Force began screening all recruits reporting to basic training or officers training school at Lackland Air Force Base and in December, 1985, the United States Army, by directive of the Department of Defense, began screening all potential military recruits prior to enlistment nationwide. Recruits found to be positive on ELISA and confirmed by the Western Blot were denied enlistment into the Armed Services of the United States. In March, 1986, under Department of Defense directive, the United States Air

Force began mandatory screening of all active duty personnel. This program accelerated in September, 1986 when a contract was awarded to a civilian firm to test 33,000 Air Force active duty personnel per month, with testing priority being given to those on mobility, troops stationed outside the continental United States and active duty personnel scheduled to be transferred overseas.

Simultaneous programs were instituted by the Army and the Navy, and we are nearing completion of this mandatory testing. All United States active duty Air Force personnel who test positive on ELISA (confirmed by the Western Blot) are subsequently sent via the military air ambulance system to Wilford Hall USAF Medical Center, San Antonio, Texas for an extensive medical, immunologic, infectious disease, and epidemiologic evaluation. The overwhelming majority of infected active duty personnel are asymptomatic HIV seropositives. Approximately 65% of those evaluated have been returned to active duty, but will be brought back yearly for follow-up evaluations. Virtually all of the remaining U.S. Air Force active duty personnel who test positive fall within the Walter Reed III through Walter Reed VI clinical classifications and have been medically retired under the U.S. Air Force disability retirement system.

The U.S. Air Force is currently approximately 95% finished with the initial mandatory HIV serologic screening study. All overseas servicemen were tested early in this program. To our knowledge, at the present time, there are no active duty U.S. Air Force servicemen stationed overseas who are not HIV antibody seronegative. The United States Army, Navy and Marines have instituted similar programs, and at the present time are nearing completion of the initial mandatory testing of active duty personnel.

The last figures for which I have current data are April, 1988, and reflected that the United States Armed Services under Department of Defense directive had tested almost two million personnel with a positive incidence rate overall of 1.6 per 1000. The incidence rate among U.S. Air Force active duty personnel was 1.0 per 1000. The incidence rate among civilian applicants to all three services was 1.5 per 100. The median age of active duty servicemen tested was 25 years and the median age of civilian recruit applicants was 19 years.

Since 1983, over 700 patients have been evaluated at Wilford Hall in various stages of HIV disease progression. As of April, 1988, 72 patients had been diagnosed as having AIDS with 650 patients having ARC, lymphadenopathic syndrome, or an asymptomatic HIV infection (Walter Reed Clinical Classification I-V). Among active duty personnel seen and evaluated at Wilford Hall, 65% have been returned to duty with an asymptomatic Walter Reed Clinical Classification of IA or IIA status. A small number of these have returned to Wilford Hall for re-evaluation at the end of one year, and 12% of those have been medically retired because of progression of disease.

Ninety-six percent of all HIV positive patients evaluated at Wilford Hall have been male and 4% female.

Using a sensitive HIV viral culture system comparable to HIV viral culture systems currently in use in many research institutions, we have been able to culture the HIV virus from approximately 60% of those patients seen at Wilford Hall, but from only an occasional spinal fluid. We appear to be able to culture the virus from patients who fall into the WR I or WR II clinical classification or from those who fall into WR III through WR VI clinical classification. This suggests that all patients might be infectious although not proving that they are equally infectious.

The majority of HIV positive patients evaluated at Wilford Hall have fallen into the asymptomatic seropositive group (WR IA) or have the lymphadenopathic syndrome (WR IIA). Smaller numbers have been classified in each of the Walter Reed clinical classifications III through VI. All patients who are Walter Reed IB or IIB (B = systemic symptoms including fever, night sweats, weight loss greater than 10%, malaise, inanition), and all patients who are III, IV, V, or VI have been retired. Some Walter Reed IA or IIA clinical classification patients have been medically retired or separated for unrelated medical conditions or for other reasons.

Since the HIV virus is cytotropic for the T helper cell and since most of the clinical manifestations associated with disease progression have correlated with the development of an absolute deficiency of T helper cells, we have looked at CD4 bearing lymphocyte numbers from the peripheral blood of patients evaluated with HIV. Since the normal number of T helper lymphocytes is above 550, it is apparent that fairly large numbers of patients who are HIV positive have absolute numbers of T helper lymphocytes that equal or exceed the normal number found.

With few exceptions, these patients cluster in the WR IA, asymptomatic HIV seropositive or WR IIA lymphadenopathic, but otherwise asymptomatic seropositive groups. At the present time, the following factors correlate as prognostic markers for disease progression; less than 500 absolute CD4 positive or T helper cells; thrombocytopenia; systemic symptoms, oral hairy leukoplakia; evaluated serum IgA levels; and oral candidiasis.

Since to my knowledge the U.S. military currently has the only large scale mandatory serologic screening program in the world for incidence/prevalence of HIV infectivity, it is not appropriate to draw too many conclusions from this data. However, it is probably safe to say that this demographic data reflects in microcosm the incidence/prevalence in the U.S. population as a whole and probably in most other industrial or developed nations. Incidence or prevalence of HIV infection in other areas of the world can clearly not be extrapolated from this data.

Summarizing the U.S. Air Force data, the following conclusions can be drawn: incidence of HIV seropositivity in the United States Air Force is probably similar to the incidence/prevalence within the U.S. population as a whole. The HIV seropositivity within the U.S. Air Force is probably similar to the incidence/prevalence within the U.S. population as a whole, and within the U.S. Air Force, the HIV seropositive population who have progressed to AIDS have a 70 to 80% mortality within one to two years of diagnosis. Although it is not apparent from our current data that significant numbers of adults have been infected heterosexually, the U.S. military will have to face that prospect within the next several years if the prevention of spread is to be avoided. Sex education will remain the single, most useful way to interrupt spread of the HIV virus.

Useful case control and sero epidemiologic data will ultimately be available from the U.S. military studies. The ramifications related to the U.S. military studies in terms of personal impact, fitness for duty determinations, the rapid mobility of a fit fighting force, and the legal and extra legal implications are being actively addressed at the present time.

Clinical Manifestations of HIV infections

Kaposi's Sarcoma

Kaposi's sarcoma was identified early as existing in an epidemic and rapidly progressive form among homosexuals with AIDS or HIV seropositivity. Although the incidence of Kaposi's sarcoma in HIV infected individuals in the United States is decreasing at the present time, the exact association between Kaposi's sarcoma and HIV infection remains unclear. It is generally felt in scientific circles in the United States that Kaposi's sarcoma will ultimately prove to be caused by another pathogenic virus. It is also felt that its clinical course is altered by co-infectivity with the HIV virus.

Epidemic/aggressive HIV associated Kaposi's sarcoma is clearly a different disease from classical Kaposi's. Classical Kaposi's is seen predominantly among elderly Jewish or Mediterranean males generally presenting on the extremities. It also exists in significant numbers of patients in equatorial Africa and has an indolent, protracted and mild clinical course overall.

It is often responsive to local surgical incision, local irradiation or chemotherapy. Epidemic Kaposi's sarcoma is seen in young, homosexual males in association with evidence of HIV infection serologically. Although it frequently has a skin presentation, it may be found only in lymph nodes or infiltrating vital organs including the lung or bowel. It has been reported as presenting as a mass lesion in virtually every organ.

It has been reported most commonly in the United States, Europe, and Haiti, and has a striking predilection for males in all of these areas. Although responses are reported with chemotherapy, it generally disseminates

widely. If the patient does not succumb to an opportunistic infection, it produces its morbidity and/or mortality either as a space occupying lesion or in association with erosion into a major vessel.

AIDS Enteritis

The gastrointestinal system has been only one of those organ systems associated with a specific clinical presentation in HIV infected individuals. AIDS enteritis (the so-called gay bowel syndrome) has a particularly debilitating presentation associated with chronic diarrhea and a wasting syndrome similar to that described in Africa epidemically as "Slim disease". Histologically, one sees heavy chronic inflammation of the lamina propria by mature lymphocytes and plasma cells with other characteristic findings on biopsy, including infiltration of lymphocytes with the appearance of follicles within the lamina propria. Patients with AIDS enteritis have these lymphoid follicles in approximately two thirds of cases reported. Additional associated histologic findings described in AIDS enteritis include: Kaposi's sarcoma in approximately one third of the cases; B cell lymphoreticular malignancies in ten percent; cytomegalovirus enteritis in 30%; and mycobacterium avian intercellularae infection in 4%. Since these percentages obviously add up to more than 100%, it should be obvious that significant numbers of patients have one or more of these associated conditions at any one time.

AIDS dementia complex

Shortly after AIDS was described clinically, it became obvious that patients with HIV infection could have a predominantly neurological presentation. This has subsequently been called the AIDS dementia complex. It includes a host of neurologic presentations: (a) vacuolar myelopathy with encephalopathy, (b) aseptic meningitis, (c) peripheral neuropathy, (d) progressive multi-focal leukoencephalopathy, (e) a subacute meningoencephalitis, and (f) an Alzheimer's type dementia. Other neurologic problems have been described that are not due to the previously mentioned direct central nervous system involvement in HIV infected patients such as CNS toxoplasmosis, CNS cryptococcal meningitis, CNS TB; or CNA lymphoma.

The implication of these observations is that the HIV virus, like other human retrovirus infections is not simply lymphotropic/lymphopathic but is also neurotropic/neuropathic. The exact relationship between HIV neurological disease and the immunologic impairment caused by HIV infection that has AIDS generally at its end point, is not clear.

In 1986, a group of U.S. Air Force physicians at Wilford Hall USAF Medical Center in San Antonio in collaboration with virologist from the Southwest Foundation for Biomedical Research in San Antonio and the University of Texas Health Science Center in San Anto-

nio began with federal government research funding to look at the epidemiology and natural history of those patients identified in the Department of Defense mandated U.S. Air Force testing program. These patients were to be followed longitudinally at Wilford Hall USAF Medical Center following initial presentation with periodic re-evaluations. A major thrust of this study was to include an initial evaluation of central nervous system involvement including evaluation of cerebrospinal fluid.

All patients who entered into this study (number to date = approximately 700) were HIV seropositive and were to have spinal fluid exams, neuropsychiatric testing, and in some cases, extensive imaging procedures and specialty neurologic studies. Examination of spinal fluid includes quantitation of nucleated cell, CSF protein, the presence of oligoclonal bands, quantitative CSF IgG levels, the calculation of a CSF IgG synthesis rate, HIV and CMV CSF cultures, the presence of CSF myelin basic protein, CSF VDRL (syphilis antibody studies), the presence of HIV antigen, and quantitative HIV antibody determinations including a CSF HIV Western Blot.

As a part of this evaluation, CSF toxoplasmosis and CSF cryptococcal infection would be ruled out and if possible, CSF mononuclear cells would be defined using monoclonal hybridoma antibody technology and cytofluorography as T cells, B cells, or macrophages. For purposes of defining abnormality of cerebrospinal fluid, we used the following determinations:

- a. A CSF protein of greater than 60,
- b. CSF nucleated cells of greater than 10,
- c. A CSF protein of greater than 50 with greater than 7 nucleated cells,
- d. The presence of an increased CSF IgG,
- e. The presence of an increased CSF IgG synthesis rate,
- f. The presence of CSF oligoclonal bands.

When these criteria were applied to the first 114 patients entering into the study beginning in October, 1986, 37% of all patients who were predominantly asymptomatic seropositives at presentation had abnormal findings. That is, an increased incidence of CSF pleocytosis and/or elevated CSF protein or an increased CSF IgG, CSF IgG synthesis rate, or the presence of oligoclonal bands. When IgG synthesis rate was compared to absolute CD4 numbers in the peripheral blood of these patients, it was obvious that some patients with modest immunologic impairment had markedly abnormal spinal fluids.

This and other determinations support the literature that suggests that immunologic impairment in HIV associated disease does not necessarily parallel neurologic abnormalities. Our group was further able to show that the abnormalities in CSF which clinically often occur early did not necessarily parallel neuropsychiatric impairment. We were not able to define neuropsychiatric im-

pairment in these patients using an extensive neuropsychiatric testing protocol that takes approximately four hours per patient to administer.

This protocol included: the Wechsler Adult Intelligence Scale Revised (WATS); finger tapping test; grip strength; Purdue pegboard; auditory serial addition test; Benton visual retention test; continuous visual memory test; verbal selective reminding test; controlled oral word association test; token test; category test; and Minnesota Multiphasic Personality Inventory (MMPI). Additionally, the first 25 patients identified with abnormal cerebrospinal fluids as defined above had the following specialty neurologic or imaging procedures: evoked potentials (VET, BAET, SEP); computerized tomography of the brain; magnetic resonance imaging of the brain; and electroencephalogram.

Neither the neuropsychiatric testing battery nor the specialty neurologic studies nor imaging procedures was able to distinguish between patients who had normal spinal fluids, abnormal spinal fluids, or borderline abnormal spinal fluids (proteins greater than 45, but less than 60 and the presence of greater than 5, but less than 7 nucleated cells). Exactly what this information will eventually mean is not clear. However, these studies will be repeated at one year on all patients who are currently enrolled in this longitudinal epidemiologic/clinical study and ultimately reported.

General Summary and the Future of the U.S. Military HIV Program

In summary, the United States Air Force has completed approximately 95% of its mandatory HIV screening study. Approximately 1.0 per thousand active duty U.S. Air Force personnel have been identified as being HIV positive by serologic screening. Forty percent of those patients have abnormal cerebrospinal fluid in the face of normal neuropsychiatric testing. Approximately 65% have been returned to active duty and 35% medically retired. Patients identified in 1986 as being HIV positive and either returned to active duty or medically retired are beginning to be re-evaluated as a part of Wilford Hall's large serial multi-center, multidisciplinary HIV, epidemiologic and clinical study.

At the present time, these patients probably represent the single largest repository of mandatory screened HIV asymptomatic patients being studied in the world. Much useful epidemiologic and clinical information should accrue from this study that will assist not only the U.S. Air Force and DoD, but other institutions or facilities with planning and directing their own HIV programs.

Since AIDS was first described in 1981, tremendous progress has been made in terms of identifying the virus responsible for this clinical syndrome. Work is ongoing to describe prognostic factors associated with HIV infection, to develop appropriate therapies for HIV infected

individuals, and to ultimately develop a protective vaccine to prevent the spread of HIV.

However, it is anticipated that the development of appropriate therapy and/or a vaccine may well be delayed into the 1990's and may not be available widely until sometime into the next century. It is imperative,

therefore, that a well directed and broad based educational program to prevent the transmission and spread of this virus be implemented worldwide. No continent, no country, no state, and no major city is likely to be spared the impact of the HIV epidemic on its population or health care resources."

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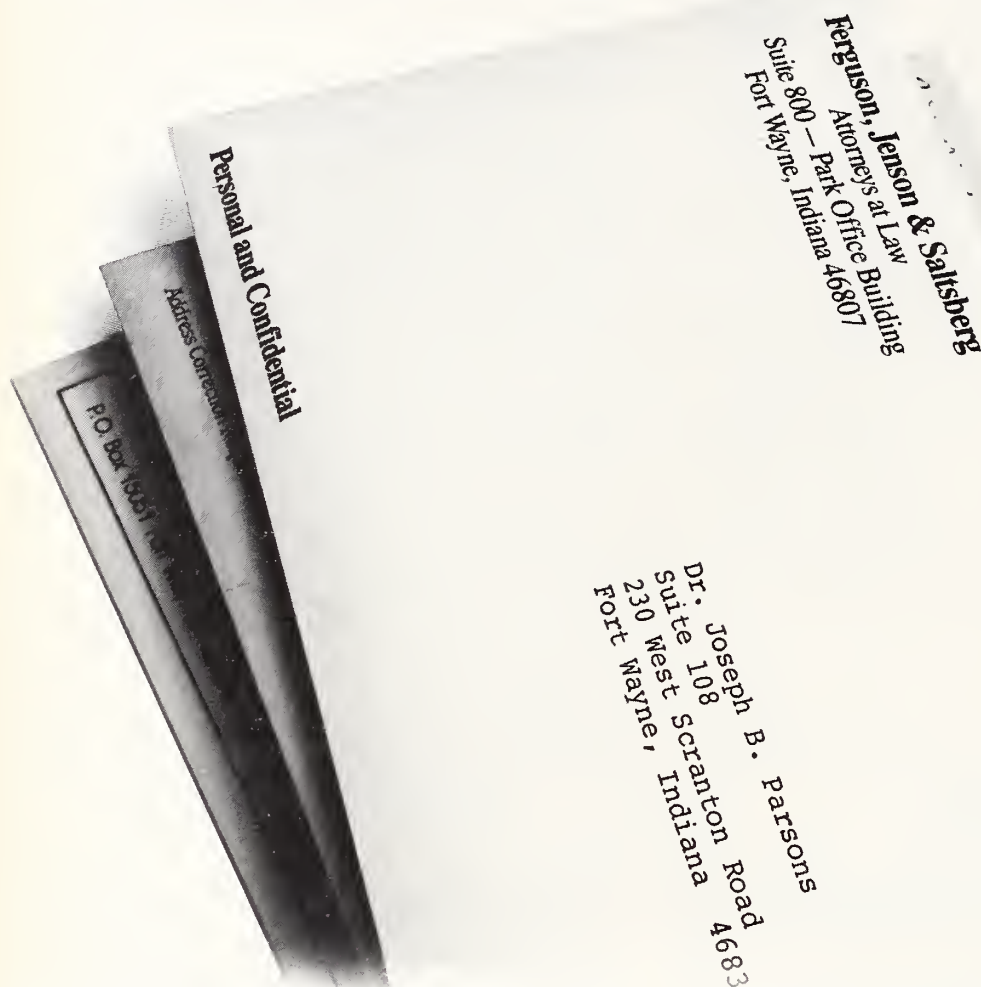
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The Coming Quality Crisis

William E. Golden, M.D.*



Anyone in the active practice of medicine must by now be aware of the growing array of quality assurance programs critiquing the care we deliver to patients. The most prominent example of this activity is in the professional review organizations (PRO's) which oversee care delivered in the Medicare and now Medicaid programs. While originally designed to monitor appropriate admission policies, these programs are beginning to embark on actual quality assessment as opposed to mere utilization monitoring and thus expand their coverage to non-cost related assessments. Governmental efforts in utilization review, however, will not be the only program in operation. The Joint Council on the Accreditation of Hospitals and Organizations (JCAHO) is embarking on an "agenda for change" which will also closely assess care delivered to patients in hospitals and outpatient facilities.

Increasingly, we are going to see the development of screening procedures to assess charts for appropriate care. The growing sophistication of computer data techniques and the increasing power of microcomputers to analyze such data bases will enable researchers and quality assurance program personnel to develop data sets on individual and group practitioners on incredibly detailed practice habits. Indeed, reports from projects embarked upon in other states indicate that detailed profiles of practice patterns are going to become a reality sooner than most physicians think and that many physicians will learn about the potential use of such profiling when their practice patterns of the previous two years are revealed to them by audits by such organizations.

At the same time, there are many in medicine who feel that the malpractice crisis can be solved by the increasing use of expert derived protocols and that adherence to such protocols and standards will result in better care for all Americans and a reduction in malpractice claims. Unfortunately, advocates of this approach will be

sorely disappointed. Aside from the impractical nature of many protocols in dealing with the protean nature of the patients with many co-existing problems, use of expert derived standards will only result in increased costs and probably not reduce malpractice risk. One only needs to pick up a textbook or two to realize that the proscriptions in the literature contain recommendations for work-ups which are far more extensive than most individuals conduct in the practice of medicine on a daily basis. In an era of cost containment, the widespread adoption of the expert protocols may well result in skyrocketing costs as practitioners will be quite fearful to omit any item on such protocols for fear of true malpractice risk and/or possible sanction by a governmental review agency.

Quality review by peer review organizations is in its infancy. The attempts by many state PRO organizations to monitor charts has resulted in true micro-analysis of a patient's hospital course and has resulted in quality sanctions which are as arbitrary as the individuals reviewing the charts. No true guidelines have yet been issued as to what is a priority quality assessment problem and, as we get away from premature discharge problems and focus on the entire hospital course, we are going to be seeing conflicting opinions and the increasing emergence of quality citations for truly gray zone matters in which there is neither literature nor consensus. Furthermore, expert derived standards could be adopted by governmental peer review organizations and practitioners will follow them to the letter without professional discretion for fear of incurring a citation and burdensome intensified review of one's records or possible elimination from an insurance program.

Here then the crisis. In an era of restricted resources for health care, the emergence of expert derived protocols in the name of quality assurance will undoubtedly result in increased utilization of resources to satisfy the criteria and not for the best interest of the patients themselves. We will then run into a crisis in which high quality standards are requested but the money available to provide such standards will be lacking. Physicians will be

* Dr. Golden is an internist at the University of Arkansas for Medical Sciences, 4301 West Markham, Little Rock, AR 72205.

caught in the middle of such conflicting goals and patients will pay for these programs by enduring unnecessary tests, prolonged work-ups, and eventually diminished resources for care that they truly need. In an era which crisis management becomes the hallmark for change, we can only hope that policy makers recognized the potential

problem to be incurred by the above scenario and that we see the emergence of more rational policy making in the area of quality assurance and cost effective care. We must develop quality assurance systems which avoid single case, single omission citations and focus instead on longitudinal aspects of a physician's overall care.

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Quality of Care Review by the PRO

J. David Busby, M.D.*

In the early years of the Prospective Payment System, peer review organizations focused on utilization review and validation of diagnostic codes submitted on hospital billing forms. Admission denial rates during these years were between 5 and 10%. The national admission denial rate was listed at just over 2% earlier this year.¹ The low denial rate is because practitioners and providers have learned to document the medical necessity of admission and to utilize alternatives to acute care admissions, such as ambulatory surgery, home health, and extended care facilities. Since there has been a reduction in the number of inappropriate acute care admissions, there has been a shift from emphasis on utilization review to a heavy emphasis on quality-of-care review by the nation's 50 PROs.

Physicians have been frustrated by PRO generated admission denial letters. However, frustration has been replaced by anger over letters regarding quality-of-care assessment by peer review organizations. This article will briefly review the statutory basis for peer review activities, the current sanction statistics available from the Office of Inspector General, the quality of care assessment performed by the Arkansas Foundation for Medical Care (AFMC) and the use of the generic screen. Also reviewed will be the referral of individual physicians and hospitals to the Professional Review Committees of the Arkansas Foundation for Medical Care, the sanction activities, and the evaluation of review performed by the Foundation.

Statutory Requirements for PRO Activities

Section 1156, Social Security Act states:

A. It shall be the obligation of any health care practitioner and any other person (including the hospital or other health care facility, organization, or agency) who provides

health care services for which payment may be made (in whole or in part) under this Act, to assure, to the extent of his authority, that services or items ordered or provided by such a practitioner or person to beneficiaries and recipients under this Act --

- 1. Will be provided economically and only when and to the extent medically necessary;*
- 2. Will be of a quality which meets professionally recognized standards of health care; and*
- 3. Will be supported by evidence of medical necessity and quality in such form and fashion and at such time as may reasonably be required by a reviewing peer review organization in the exercise of its duties and responsibilities.*

The Act further requires:

If after reasonable notice and opportunity for discussion with the practitioner, or person concerned, any organization having a contract with the Secretary under this part determines that such a practitioner or person has -

- A. Failed in a substantial number of cases substantially to comply with any obligation imposed on him under Subsection A; or*
- B. Grossly and flagrantly violated any such obligation in one or more instances;*

- such organization shall submit a report and recommendations to the Secretary.²

This is the basis for the recommendations of sanctions to the Secretary of Health and Human Services.

Sanction Activities

James Patton, of the Office of Inspector General, recently presented sanction statistics at the Medical Director's Section of the American Medical Peer Reviews Association Conference in Washington, D.C. The statistics included that since October of 1985, 164 recommendations for sanction have been received by the Office of Inspector General from the 54 peer review organiza-

* Dr. Busby is the Executive Vice President of Medical Affairs with the Arkansas Foundation for Medical Care.

tions. Of those, 114 were because practitioners were felt to have provided care which grossly and flagrantly violated the obligations to provide appropriate quality of care; 49 were because of substantial quality of care problems in a substantial number of cases, and one was because of poor documentation. Action had been completed on 156 of the sanction cases; eight cases are pending before the Office of Inspector General.

Of the 156 sanction actions completed by the Office of Inspector General, only 93 sanctions have been imposed. Sixty-five physicians and one hospital have been excluded from Medicare participation for variable periods of time. Twenty-five physicians and two hospitals have received monetary penalties. The Office of Inspector General rejected the remaining sanction cases. Twenty-three of the rejections were due to failure by the peer review organization to follow the recognized regulatory procedures, ten were because the medical evidence was not considered to be sufficient to substantiate the recommendation made by the peer review organization, and 28 were because the Office of Inspector General could not determine that the physician was unwilling and unable to correct a practice pattern.

For a sanction to be imposed by the Office of Inspector General, these must be a documented violation of Section 1156 of the Social Security Act, and it must be documented that the provider or practitioner is not willing and/or able to correct the practice pattern.

Of the 93 sanctions imposed, 51 providers or practitioners chose not to appeal to an Administrative Law Judge. In 25 of these cases, no appeal was required, and 26 settled with the Office of Inspector General, meaning that a modification was made in the recommendation made by the peer review organization. Sixteen cases have been heard by an Administrative Law Judge; eight cases have been overturned. Most of these cases were submitted during the early years of the PRO sanction activities.³

The statistics available from the Office of Inspector General indicate that PROs and the sanction recommendations break down in the following manner.⁴

# of PROs	# of recommendations for sanction
2	9+
2	9
1	7
4	2
13	1
16	0

Generic Screens/Failures

The process leading to a recommendation to the Inspector General for sanction by a peer review organization is lengthy, but it begins with the assessment of qual-

ity of care provided an individual Medicare beneficiary. Less than two years ago, the Health Care Financing Administration (HCFA) mandated that all PROs implement a quality of care screening review using the Generic Quality Screen. The screen is utilized by all 54 peer review organizations. There can be no variation from this screen. The exact instrument - that is, the written manner in which it is presented - may vary from one peer review organization to the next. However, the elements of the generic quality screens cannot be changed by a peer review organization.

When the area review coordinator, a nurse reviewer, first reviews the record at the hospital, the coordinator must check off all of the various elements of the generic quality screen, indicating whether or not the screens have failed. A copy of the generic quality screen used by the Arkansas Foundation for Medical Care is shown as Figure 1.

The generic quality screen is broken down into various elements including Section 001, which looks at the adequacy of discharge planning; Section 002, which relates to the medical stability of the patient at time of discharge; Section 003 evaluates deaths; Section 004 looks at nosocomial infections; Section 005 relates to unscheduled return to surgery; and Section 006 relates to trauma suffered in the hospital.

A generic screen failure does not document that a quality of care problem was present. The case must be referred to a physician for review unless the generic quality screen failure is Section 001, 004, or 006B. The area review coordinator can list these as possible problems. Once each quarter, a hospital exceeding its threshold (2.5% or 3 cases, whichever is greater) is notified of these screen failures (001, 004, and 006B), which could indicate problems with discharge planning, nosocomial infections, or falls for the patients listed on a data print-out. The hospitals are instructed to review the quality of care provided in these patients and to take actions considered appropriate.

For the remaining portions of the generic screen, the area review coordinator must review that screen failure to determine if there is a possibility of a quality of care problem associated with the generic screen failure. If so, the record must be referred to a physician advisor for review. An example would be a failure of Screen 002D; that is, abnormal result of diagnostic services which are not addressed and/or resolved or where the record does not explain why they are unresolved. If a patient had a sodium of 123, that are review coordinator must refer that record to a physician advisor for review. If the attending physician does not comment on why the sodium was low and why it was not addressed, it must be considered as a potential quality of care problem. The physician advisor then provides a brief rationale listing why it could be considered as a quality of care problem. A letter is sent to the individual provider or practitioner.

Figure 1. Generic Quality Screen use by the Arkansas Foundation for Medical Care

GENERIC QUALITY SCREENS

N (APP)	Y (PA)		Physician Severity Indicator _____		
Q 001	[]	Adequacy of discharge planning: No documented plan for appropriate follow-up care or discharge planning, with consideration of physical, emotional, and mental status/needs at the time of DC	0001	___	
Q 002		Medical stability of the patient at discharge	0002	___	___
A	[]	B/P on day before or day of discharge systolic--less than 85 or greater than 180 diastolic--less than 50 or greater than 110	0002A	___	___
B	[]	Temp. on day before/day of DC greater than 101 ⁰ oral(rectal 102 ⁰)	0002B	___	___
C	[]	Pulse less than 50 (or 45 if the patient is on a beta blocker), or greater than 120 within 24 hrs. of discharge	0002C	___	___
D	[]	Abnormal results of diagnostic services which are not addressed and resolved or where the record does not explain why they are unresolved	0002D	___	___
E	[]	IV Fluids/Drugs on day of discharge	0002E	___	___
F	[]	Purulent or bloody drainage of post-op wound within 24 hrs. prior to DC	0002F	___	___
Q 003		Deaths	0003	___	___
A	[]	During or following elective surgery performed during the current admission	0003A	___	___
B	[]	Following return to intensive care unit, coronary care or special care unit within 24 hrs of being transferred out	0003B	___	___
C	[]	Other Unexpected Death	0003C	___	___
Q 004		Nosocomial infections	0004	___	
A	[]	Temperature elevation greater than 2 ⁰ more than 72 hrs. from admission	0004A	___	
B	[]	Indication of an infection following an invasive procedure	0004B	___	
Q 005	[]	Unsched. return to surgery within same admission for same condition as previous surgery or to correct operative problem	0005	___	___
Q 006		Trauma suffered in the hospital	0006	___	___
A	[]	Unplanned removal or repair of normal organ (i.e., removal or repair not addressed specifically in operative consent)	0006A	___	___
B	[]	Fall with injury or untoward effect	0006B	___	
C	[]	Life-Threatening complications of anesthesia	0006C	___	___
D	[]	Life-Threatening transfusion error or reaction	0006D	___	___
E	[]	Hospital acquired decubitus ulcer	0006E	___	___
F	[]	Care resulting in (1) <u>serious</u> or (2) <u>life-threatening complications</u> , not related to admitting signs and symptoms, including, but not limited to the neurological, endocrine, cardiovascular, renal or respiratory body system	0006F	___	___
G	[]	Major adverse drug reaction or medication error (1) <u>with serious potential for harm</u> or (2) <u>resulting in special measures to correct</u>	0006G	___	___

Quality of Care Problem Letters

These letters indicating that a potential quality of care problem has been noted by the Arkansas foundation for Medical Care for a hospital stay of a medicare beneficiary are sent only to the individual addressed in the letter. The information is considered privileged and confidential. The hospital is not notified if a physician receives an individual letter, and the physician is not notified if the hospital should receive an individual letter regarding a quality of care problem. The quality of care problem must be assigned to the attending physician unless it can be documented clearly in the record that the quality of care problem is the responsibility of some other physician or the provider.

As previously mentioned, physicians are frustrated and angry upon receiving a quality of care letter. However, the AFMC must notify a physician of a potential quality of care problem anytime a peer indicates that a quality of care problem may have occurred. All review which could result in adverse letters to providers or physicians is done by practicing Arkansas physicians. While the quality of care activities by the Arkansas Foundation for Medical Care may be viewed by some physicians in a negative light, quality of problems occasionally occur in the state of Arkansas. There are only a few physicians in the state of Arkansas who practice medicine that does not meet the accepted standards of care. In the past there has been no effective means of identifying these physicians or of modifying their practice pattern.

The attending physician or the hospital has 20 days to provide further information. It is recommended that the physician or the hospital contact the AFMC during the established time frames mentioned in the letter and discuss the care with the appropriate representative of the Foundation. After a call, *the individual must follow up with a letter*. At that point, the chart will be re-reviewed by another physician advisor. The entire chart as well as the notes from the telephone call and the information submitted in the letter will be reviewed. If the information is sufficient, the quality of care problem will be listed as resolved, and it will not be listed on the profile of the attending physician or the hospital. If the physician advisor believes that the quality of care problem was not explained by the additional information, then the quality of care problem is confirmed. It is then listed as a confirmed problem on the profile of the physician or the provider. *If written correspondence is not received, the problem is automatically confirmed as a quality problem.*

Professional Review Committees

Once each quarter, a profile is generated by the Data Department of the Arkansas Foundation for Medical Care. It lists all physicians having three cases or more of confirmed quality problems and all hospitals exceeding their threshold (that is, 2.5% or three cases of quality

problems, whichever is greater). Based on the severity of the problems, the physician or the hospital may be placed on intensified review for the next review quarter. If the quality of care problems are considered to be at a substantial level or gross and flagrant level, the cases will be forwarded to a subcommittee for review. The subcommittee determines whether or not the problems in fact represent substantial or gross and flagrant problems. If they do, the physician or the provider will be invited to a Professional Review Committee by a letter notifying them of possible sanction action.

The Professional Review Committees of the Arkansas Foundation for Medical Care meet once a month in a rotating basis. Each committee is comprised of eight physicians in active practice from across the state. Both urban and rural physicians are represented. At least half of the physicians on the committee are in primary care. When cases are referred to a Professional Review Committee, three possible determinations may be made. First, the committee may determine that the quality of care problem has been completely rebutted, meaning that the quality of care problem does not exist. The committee may downgrade the quality of care problem in severity as a second determination.

The third possible determination the committee may make is that the physician or provider should be issued a sanction notice. In that event, the physician or provider is provided opportunity to discuss the problem with a Professional Review Committee. At that time, the physician or the provider may have an attorney present and may present expert witnesses. A tape is kept of the discussion with the physician or provider and a verbatim transcript is prepared.

If the follow-up Committee determines that there is a substantial problem in a substantial number of cases, the Professional Review Committee can implement a corrective action plan for the physician or provider and place the physician or provider on intensified review for a specific period of time.

After the corrective action plan has been completed, if the physician or provider has been found to have corrected the adverse practice pattern, the physician or provider is then placed on routine review. If the corrective action plan does not correct the pattern of care, the entire case file will then be referred to the Board of Directors of the Arkansas Foundation for Medical Care. The Board may make a recommendation to the Office of Inspector General to exclude the physician or provider from the Medicare program. However, at the meeting with the Board, the physician or provider has the opportunity to present expert witnesses and to have benefit of legal counsel present. The individual may provide further information within five days after that meeting and also may have a verbatim transcript of that meeting if the case is forwarded to the Office of Inspector General with a sanction recommendation.

Generic Screen Failures

In the last year, quality of care assessment by the AFMC has caused frustration for Arkansas physicians and for the Foundation because of the large number of cases which have generic screen failures. Considerably more than budgeted was expended for physician advisor review because of generic screen failures in the last month. The most recent national statistics indicate that approximately 20% of the cases reviewed will have a generic screen failure. Out of all the generic screen failures, less than 40% are felt to represent possible problems when reviewed by a physician advisor. After additional information is received from the attending physician, the majority (70 - 80%) of these are considered to represent only a generic screen failure and not a quality of care problem.

The use of generic screen could be viewed by physicians in a positive manner as an aid to the physician in making certain that something was not overlooked. Physicians should have a copy of the generic screen available when the discharge summary is dictated. A simple statement in the discharge summary regarding one of the failures of the generic screen could provide the reviewing physician with enough information so that the generic screen failure would not be identified as a possible problem.

During the period from July, 1986 through April, 1988, 56 physicians and/or providers (including new and repeat cases) were referred to a Professional Review Committee for review of quality of care problems. The reviewing Committee voted to rescind the prior action after additional information was received from the physicians in 13 cases. Additionally, the Committees indicated that no sanction activity was necessary after additional information was received from the physician in 12 or the 56 cases. Therefore, approximately 47% of the cases referred to one of the Arkansas Foundation for Medical Care's Professional Review Committees were resolved after additional information was received by the Arkansas Foundation for Medical Care. The remaining 53% were either downgraded from a gross and flagrant case to a substantial, had corrective action plans implemented, or were forwarded to the Office of Inspector General with recommendation or sanction.

Sanction Recommendations

Since July, 1986, six sanction recommendations have been made by the Arkansas Foundation for Medical Care to the Office of Inspector General. Five of the six were referred to the Office of Inspector General for monetary assessment. Two of these were approved. Three were rejected because the Office Inspector General determined that monetary assessment was inappropriate for these cases.

One case was referred for exclusion. The Office of Inspector General rejected this case because of addi-

tional information supplied by the physician after the Arkansas Foundation for Medical Care had made its recommendation. It was the finding of the Office of Inspector General that the physician was willing and able to correct the practice pattern.

One other case has been referred to the Office of Inspector General. This sanction process was begun prior to 1986. At the present time, the case is still pending.

There were two other sanctions recommended before July, 1986 by the AFMC to the Inspector General's office. Both of these were approved, and the physicians were excluded from participation in the Medicare program for one year in one case and five years in the other case.

HCFA/SuperPRO Review AFMC Records

The quality of review performed by the AFMC is evaluated by the Health Care Financing Administration personnel from the Regional Office of Dallas, Texas. These representatives will spend two weeks at a time in the Central Office of the AFMC reviewing records. If their review differs from review by the AFMC, the cases are copied and referred to physician advisors utilized by the Regional Office in Dallas. If the physician advisors reviewing cases for the Regional Office indicate that the quality of care assessment by the Arkansas Foundation for Medical Care was in error, it is considered to be strike against the Foundation.

The Foundation's review activities are also evaluated by the SuperPRO. The SuperPRO has contracted with the Health Care Financing Administration to review all 50 or the PROs. Twice each year, the AFMC must supply 400 records chosen at random by the SuperPRO. The SuperPRO does not look at the review decision of the AFMC until it has completed its review. If the SuperPRO's review differs from that of the Foundation, the Foundation is notified. The Foundation then has a brief period of time to provide rebuttal information seeking to convince the SuperPRO that the decision made by the AFMC was correct.

During the last SuperPRO review, numerous quality of care problems identified were detected that had not been noted by the Arkansas Foundation for Medical Care. The Regional Office also identified several cases that were considered to represent quality of care problems. The AFMC had not listed these as quality of care problems.

The problems identified by the SuperPRO and the Regional Office but not AFMC fell into several categories but most often were related to infectious disease and antibiotic usage. In several cases, the AFMC was cited because the cases reviewed indicated culture and sensitivities were not ordered prior to institution of antibiotics. The antibiotic course in some cases was considered to be too short. In some cases, antibiotics were not indicated.

The failure to monitor renal status while patients were receiving aminoglycoside therapy was considered to be a significant problem by the SuperPRO and the Regional Office. Abnormal laboratory values and x-ray findings that were not addressed also created a significant problem on review by the SuperPRO and the Regional Office.

Without questions the review activities the next few years will be even more intensive than they are now. It appears that the focus on quality of care assessment will continue in the upcoming years. The Arkansas Foundation for Medical Care will try to improve the quality of review so that only significant quality of care problems are brought to the attention of the individual physician or provider.

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Consensus Conference on Colorectal Carcinoma

David Z.J. Chu, M. D.*; John R. Broadwater, M.D.;
Michael Keppen, M.D.; and Kent C. Westbrook, M.D.

ABSTRACT

Consensus clinical conferences in general seek to educate, recommend implementation of new techniques and findings, seek cost-effective means of practice and promote clinical research among participating groups.

Colorectal carcinoma is the second most common malignant neoplasm in the United States. Efforts in screening and in a multidisciplinary approach may contribute to improved survival rates reported in recent series.

INTRODUCTION

Colorectal carcinoma is the second most common malignancy in the United States, and approximately 70,000 individuals died in 1986 of colorectal cancer, second only to lung carcinoma. The incidence of colorectal carcinoma in this country is 52 cases per 100,000 population yearly.¹ Diet of high fat and low bulk is a significant contributing factor.² As an example, some countries in Africa and Central America have incidence of colorectal carcinoma 20-fold lower than that of the Western industrialized countries.

The cure rate after treatment is approximately 50%, with over 80% cure rate for cancers confined to the bowel wall and free of metastasis. Unfortunately, greater than half of the patients presenting with colorectal tumors already have lymph node or more distant metastasis.

SCREENING

Nearly everyone over age 40 should undergo stool occult blood screening. The most cost-effective method has been found to be three stool guaiac tests after a three-day diet refraining from red meat, horseradish, tur-

nips, aspirin, vitamin C, and iron supplements.^{3,4} If any of the three tests are positive, the patient should undergo colonoscopy. Barium enema radiographic study (BE) and proctoscopy can also be done. Screening should be performed every two years. Any other individual in the high-risk group (Table 1) should undergo surveillance every one to three years with BE or colonoscopy.

DIAGNOSTIC WORKUP

The majority of patients will present with the complaint of hematochezia. Colonoscopy or BE, along with sigmoidoscopy, can be used to confirm the presence of a neoplasm. In this age of cost containment, one questions whether both colonoscopy and BE are required. Lesions on radiographs can be easily shown in teaching conferences and kept as a record; however, accuracy in demonstrating small adenomas is about 85%,^{5,6} although a recent study showed double-contrast BE is as sensitive as colonoscopy in diagnosing colorectal neoplasms.⁷ Colonoscopy can obtain tissue and be therapeutic for polypoid lesions. Some colonoscopy procedures may require in-patient hospitalization. The presence of polyps

Table 1. Patients at Increased Risk for Colorectal Cancer

Age 40 years
Colorectal adenomas
Hereditary polyposis syndromes
Chronic inflammatory bowel disease
Previous colorectal adenocarcinoma
Family history of colorectal cancer
Familial colon cancer syndromes

Screening with stool occult blood test is recommended for anyone over age 40; patients under other categories listed above need surveillance regularly with colonoscopy or barium enema radiographs.

* Dr. Chu was the recipient of the American Cancer Society Clinical Oncology Career Development Award. His address is Department of Surgery, UAMS, 4301 West Markham, Little Rock, AR 72205.

Table 2. Diagnostic Work-up for Colorectal Carcinoma

Barium enema or colonoscopy
Blood tests: Blood count, liver enzymes, creatinine, BUN, CEA
Chest x-ray
CAT Scan - of liver if liver enzymes or CEA abnormal or of pelvis if rectal carcinoma is fixed.
IVP: If urinary symptoms or hematuria present, if history of previous pelvic surgery
Cystoscopy: If IVP abnormal, if dysuria present in rectal cancers

Minimum recommended tests for primary colorectal cancers prior to resection. Other imaging tests, computer axial tomography (CAT) scans, liver-spleen, bone or brain scans and intravenous pyelogram (IVP) are obtained only with specific indications.

and carcinoma may alter the surgical management and favor a subtotal colectomy.⁸ Thus, the choice of colonoscopy and BE must be individualized and, in many instances, both tests are desirable.

Once the diagnosis of colorectal carcinoma is suspected, the minimal workup requires the tests listed in Table 2. Imaging tests of bone, brain, and urinary tract would be indicated if patients report pertinent symptoms. For rectal carcinomas with symptoms of dysuria and hematuria, cystoscopy is helpful in assessing possible bladder involvement. If the tumor is fixed by manual or rigid proctoscopic examination, a computer axial tomography (CAT) scan of the pelvis is very helpful. Up to 20% of primary carcinomas present with synchronous liver metastasis. CAT scan of the liver is indicated for abnormalities on physical examination (enlarged or nodular liver, ascites), serum liver enzymes elevation, or carcinoembryonic antigen (CEA) level greater than 10 ng/ml.

STAGING

Cuthbert E. Dukes introduced his classification in 1935. This has been modified by later authors.^{9,10} Due to the use of multiple staging schemes, it is important to adopt a single staging system as proposed by the Commission on Cancer¹¹ such as the TNM system which, in fact, is nearly identical to the Astler-Coller⁹ and Gunder-son-Sosin modifications¹⁰. Other prognostic variables should be recorded, including CEA level, number of nodes involved,¹² and presence of obstruction or perforation. Future variables can include DNA histogram by flow cytometry.¹³

TREATMENT

Invasive carcinoma in a polyp can be treated by endoscopic polypectomy. Segmental resection of the colon after polypectomy is indicated for the conditions listed in

Table 3. Invasive Carcinoma in Polyp

SEGMENTAL COLECTOMY IF:

Carcinoma at margin of excision

50% villous component

Poorly differentiated carcinoma

Carcinoma in lymphatics, vein, or part of polyp not excised

Management of carcinoma presenting in a polyp. Carcinoma in-situ confined in the polyp can be managed with polypectomy only. Segmental colectomy is recommended following polypectomy for conditions listed above.

Table 3. These conditions are usually found in a sessile polyp, often of the villous variety, not easily removed by endoscopic techniques. Sessile or other polypoid adenomas measuring 1.0 cm or greater, not removed by endoscopic techniques, should be removed by open surgical methods. Polypoid carcinomas are uncommon and usually require further surgery for complete resection. For carcinomas in the colon, a resection of the bowel is carried out with portion of mesentery and region of lymphatic drainage as illustrated in Figure 1. It is not known whether aggressive nodal dissection is of benefit,^{14,15} although all gross tumor nodules in the mesentery should be resected en bloc. For rectal carcinomas, low anterior resection (LAR) with primary anastomosis has been performed for lesions as low as in the distal third of the rectum (4-5 cm from anal verge) with local recurrence rates comparable to the combined abdominal perineal resection (APR) of Miles. These good results are partly due to the efficacy in local control by radiation therapy, which will be discussed further.

In the patient who has known metastatic disease, resection of primary tumor is usually indicated to avoid the complications of bleeding, obstruction or perforation. In the rectum, other treatment modalities are available besides LAR and APR. Transperineal approaches, such as the Kraske or York-Mason procedures^{16,17} can be used for rectal adenomas. Their application to distal rectal carcinomas is not well defined. In patients of high operative risk, who will not tolerate a celiotomy, the perineal approach would be a reasonable compromise. Other approaches to rectal carcinomas are fulguration with cautery or laser and transrectal excision. These methods are usually used as palliative procedures. The use of radiotherapy as a primary treatment for rectal carcinomas, or in conjunction with surgery in anal sphincter sparing procedures, in selected patients can result in survival rates comparable in APR.

Table 4. Postoperative Monitoring Schedule

Physical Examination	Every 3 mos. for 2 yrs. Every 6 mos. for 2-5 yrs. Every year after 5 yrs. (Include fecal occult blood test)
Liver Enzymes: Bilirubin, Serum glutamic-oxaloacetic transaminases (SGOT) and Alkaline phosphatase (AP)	Every 6 mos. for 5 yrs.
CEA	Every 3 mos. for 2 yrs. Every 6 mos. for 2-5 yrs.
CXR	Every year
Colonoscopy	At 6 mos.; at 3 yrs.; then every 2-3 yrs. Every yrs. of adenomas found.

Any abnormalities revealed by the above tests are to be inspected by further imaging tests, as indicated.

POSTOPERATIVE FOLLOW-UP

Patients whose colorectal carcinomas have been resected with curative intent should be monitored for recurrences, undiagnosed residual disease, second primaries, and colorectal adenomas. A schematic plan is provided in Table 4. If the CEA has not returned to normal values postoperatively, one would suspect residual disease, an isolated second primary, or false positive CEA elevation due to another nonmalignant condition. Colonoscopy and liver CAT scan should be performed if they were not obtained preoperatively. Colonoscopy or BE for surveillance should be done at least twice in the first five years. If these examinations are normal, the colon needs to be examined only each three to five years. The incidence of second primary cancers is about 4%, and new adenomas 10-20%.^{8,18} These figures are higher if polyps are encountered,⁸ and more frequent surveillance is recommended.

In the course of follow-up, if the CEA rises above the patient's baseline value, a search for a recurrence is initiated, according to Table 5. If none is found, and a repeat CEA is still elevated, a "second-look" laparotomy should be done. CEA will often be normal in cases of local recurrence, so a lower endoscopy should be done six to twelve months following the resection. Approximately 10% of all recurrences can be salvaged, with a cure rate of approximately 25% for all re-resected tumors.¹⁹

GENERALITIES REGARDING RADIATION THERAPY

The use of radiation therapy in the gastrointestinal tract continues to evolve, with better understanding of

radiobiology, better treatment techniques, and improved combination use of surgery, radiation and chemotherapy in a planned manner. The radiation treatment techniques for the colon vary greatly with the anatomic area of involvement, and it is necessary to consider three separate areas for discussion: the intra-abdominal colon, the rectum and the anus.

Intra-abdominal Colon

That portion of the colon above the peritoneal reflection has been resistant to improved results by the addition of radiation as an ancillary aid to surgery. Generalizations regarding radiation in this section of the colon are difficult, and individualization is necessary. Preoperative radiation has not been utilized to any extent and perhaps should be considered in the future.

Intraoperative radiation has apparently improved overall survival, although the exact role is still evolving. The bulk of experience has been with postoperative radiation.^{12,20-22}

Postoperative radiation should be considered for the following: residual tumor that is unresectable, areas where microscopic extension is likely, adjacent to positive lymph node areas, and the areas of tumor spill. The use of surgical clips to outline the extent of residual disease is helpful and allows the radiation therapist to use shrinking-field techniques to decrease radiated volume in areas of high dosage. Occasionally, whole abdominal radiation will be of use, but most fields will be as limited as possible. The usual dose range is 45-50 Gy tumor dose at the rate of 1.8 Gy per day, with possible boost to small areas to a total dose of 60-65 Gy.²³⁻²⁶

Rectum

Much new data has become available in the last five years concerning radiation in rectal cancer. This data greatly amplifies the older information and allows the ra-

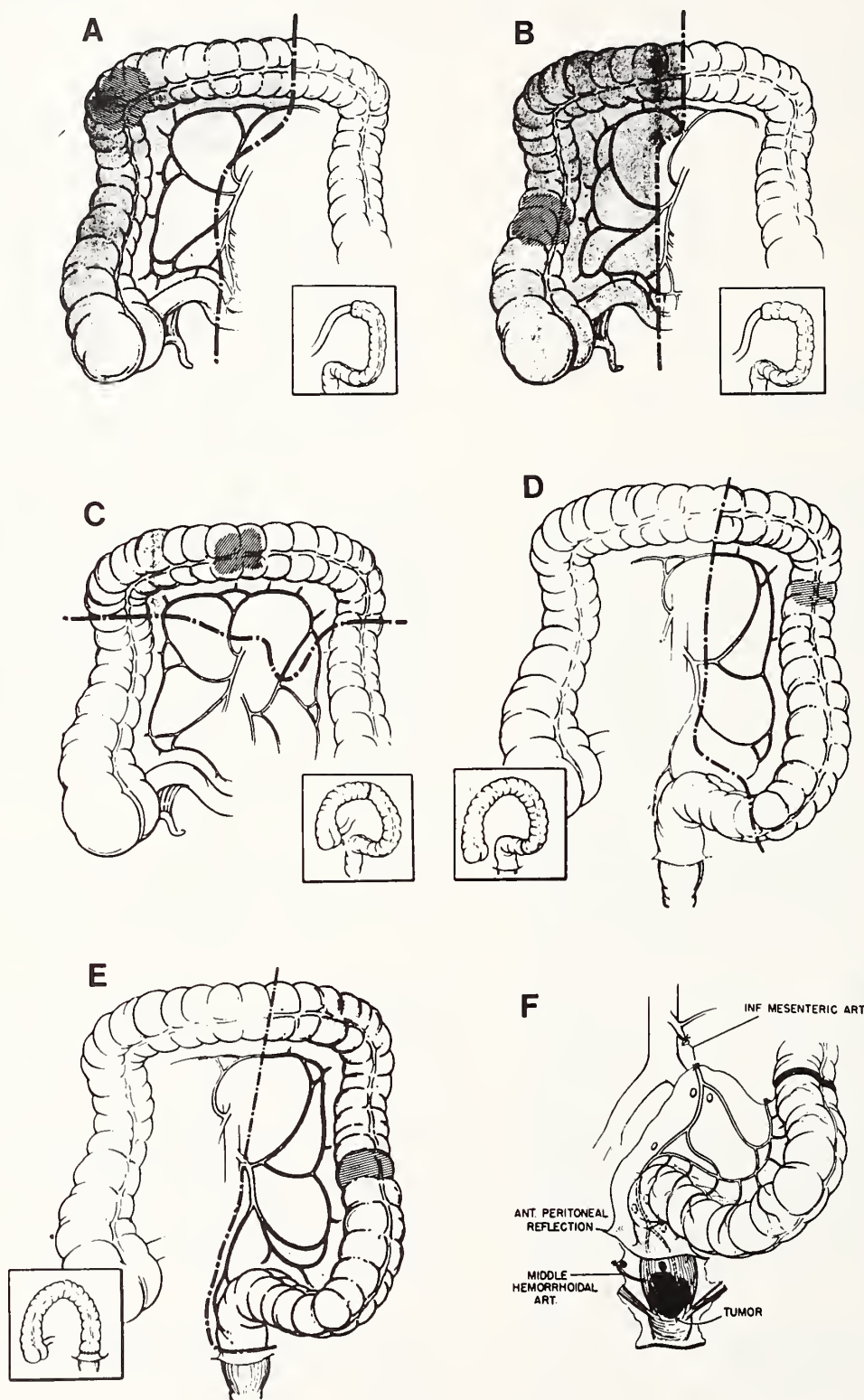
Table 5. Recurrent Disease

CEA 5 NGM/ML -	Repeat CEA Physical Examination & CXR Cat scan of abdomen (and pelvis) Colonoscopy (brain, bone scan) Laparotomy* (thoracotomy)
----------------	---

*If CEA is elevated, workup negative for recurrence, laparotomy is recommended. When workup reveals site of metastases, laparotomy or thoracotomy if resectable.

Steps outlined for evaluation of patients with postoperative rise in CEA level. Pelvis to be included in CAT scan if recto-sigmoid tumor, brain and bone scan if specific indications exist.

Figure 1. Diagram of extent of surgical resection for right hemicolectomy (A,B), transverse colectomy (C), left hemicolectomy (D), sigmoid and left hemicolectomy (E) and abdominal perineal resection (F). Adapted with permission from Slanetz, CA and Herter, FP: *The Large Intestine, in Lymphatics in Cancer*, ed. Haagensen, C.D., WB Sanders Company, New York, 1972, pp. 489-559.



diation therapist to contribute more to the care of these patients. Of particular value has been the contribution of Professor Jean Papillon, whose treatment techniques in the last thirty years evolved improved results. It is the treatment techniques of Professor Papillon which will be duplicated in our patients.²⁷⁻²⁹

Preoperative radiation should be considered for any patient with rectal cancer when there is likely transmural extension of tumor or nodal spread is likely. Radiation dosage is modest, but delivery with altered time fractionation. Thirty Gy tumor dose will be delivered in ten fractions over 12 days, using fields localized to the primary tumor and its immediate lymphatic drainage. A combination of sacral and perineal fields will be used, depending on the location of the tumor. Surgery will follow in four to six weeks after completion of radiation. Systemic chemotherapy will be used in all patients as a radiation sensitizer. 5-FU in a dosage of 600 mg/M² per 24 hours will be given by infusion on days 1-4. Mitomycin-C will be given in a single dosage of ten mg/M² IV bolus on day one only. Preoperative radiation will begin on day one.

Postoperative radiation should be considered in any patient with unresectable or residual tumor after surgery or if there are lymph node metastases. In instances of nonbulky residual, tumor dose of 30-35 Gy will be delivered in 10-12 fractions over 16-19 days using appropriate sacral and/or perineal fields. With more bulky residual disease, therapy is individualized, but generally will require dosage of 50 Gy in five and a half treatment weeks using multiple fields. Boost of ten Gy will be considered. Special techniques with 5-FU and Mitomycin-C will be used, in the same dose schedule as above.^{12, 22-26}

A small group of highly select patients with rectal cancer may be considered for treatment by radiation without planned surgery. These patients will have well-differentiated tumors less than five cms in diameter, located in the lower one-half of the rectum. The treatment will be with contact intrarectal x-ray therapy delivering a dose of 7500 Roentgen to 12,500 Roentgen, fractionated every two to four weeks. After completion of contact therapy, interstitial implant of iridium or cesium will deliver an additional 20 Gy tumor dose. The implant will be done at eight to ten weeks after completion of contact therapy. These patients will require more careful follow-up, as local failure can still be cured with appropriate surgery.^{28,29}

Radiation in Recurrent or Metastatic Disease

The usual indications for radiation in recurrent or metastatic disease are pain, bleeding, and local destruction or partial obstruction. The organs most often involved are bone, soft tissues of the pelvis, liver and lung. The best results are usually seen with localized disease. It is probable that the combination of 5-FU and Mitomycin-C improves response. The most common dosage

used is 30 Gy tumor dose in ten fractions with occasional boost to higher dosage using shrinking fields. Higher doses are used when there is destruction of weight-bearing bone or nerve involvement with recurrence in the soft tissues of the pelvis.

Chemotherapy

The chemotherapy of disseminated colorectal has been based on 5-fluorouracil (5-FU) for over 20 years. Response rates ranging from 9% to 30% have been reported in various schedules of 5-FU alone or in combination with other agents.³⁰ Palliation of symptoms can be achieved in some patients, but overall prolongation of survival has not been achieved with current chemotherapy.

Cooperative group investigations are constantly searching for new active agents in Phase II studies of untreated colorectal cancer patients with good performance status. Other approaches to improve results include biochemical modulations of 5-FU to improve response rates. Leucovorin and 5-FU have been shown to possess higher response rates than 5-FU alone, but overall survival was not affected.

Regional infusion of chemotherapy used primarily against liver metastases, attempts to increase tumor/systemic circulation drug ratios. Randomized Phase III studies suggest that the response rate can be enhanced over conventional intravenous chemotherapy.³⁵⁻³⁷ Once again, survival advantage, the ultimate objective of these therapies, has not been adequately addressed in published studies and remains unknown. Regional hepatic artery infusion of chemotherapy remains an attractive area of clinical investigation for centers with experience and participation in multi-institutional studies.³⁷ Regional infusions can also be achieved for pelvic recurrences where embolization, infusion or isolation perfusion can be accomplished through a laparotomy,^{39,40} and hyperthermic perfusion can increase the antitumor activity of drugs used.

The theoretical advantage of chemotherapy in the adjuvant setting, against "micrometastases", has stimulated great interest in the postoperative treatment of Stage III colorectal cancers with 5-FU, despite its low response rate in disseminated colorectal cancer. The Gastrointestinal Study Group report summarizes most studies' results by showing no advantage with 5-FU combinations as adjuvant therapy in any patient group with colon cancer.¹²

The same group, however, has shown improved local control and survival advantage with adjuvant chemotherapy and radiotherapy in resected rectal adenocarcinoma, when the tumor extends beyond the bowel wall.²⁶

Although questions regarding the schedule of 5-FU administration in adjuvant studies remain, the main obstacle to success in adjuvant therapy of colorectal cancer will be the development of more active drugs.

Interest in immunotherapy has stimulated clinical trials in tumors felt to be poorly responsive to chemotherapy, including colorectal cancer. Interleukin 2 and lymphokine-activated killer cells have produced definite responses in colorectal cancer, but the response rates are no higher than rates achieved with conventional chemotherapy, and toxicity is considerable.⁴⁰

Adjuvant immunotherapy with the antihelminthic levamisole, combined with 5-FU, shows some promise, but remains to be confirmed.³¹

Immunotherapy with interferons, tumor necrosis factor, and lymphokines remains in Phase II investigations at present.

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ELECTROCARDIOGRAM OF THE MONTH

Bob Banister, M.D.
John W. Watson, M.D.
UAMS Division of Cardiology
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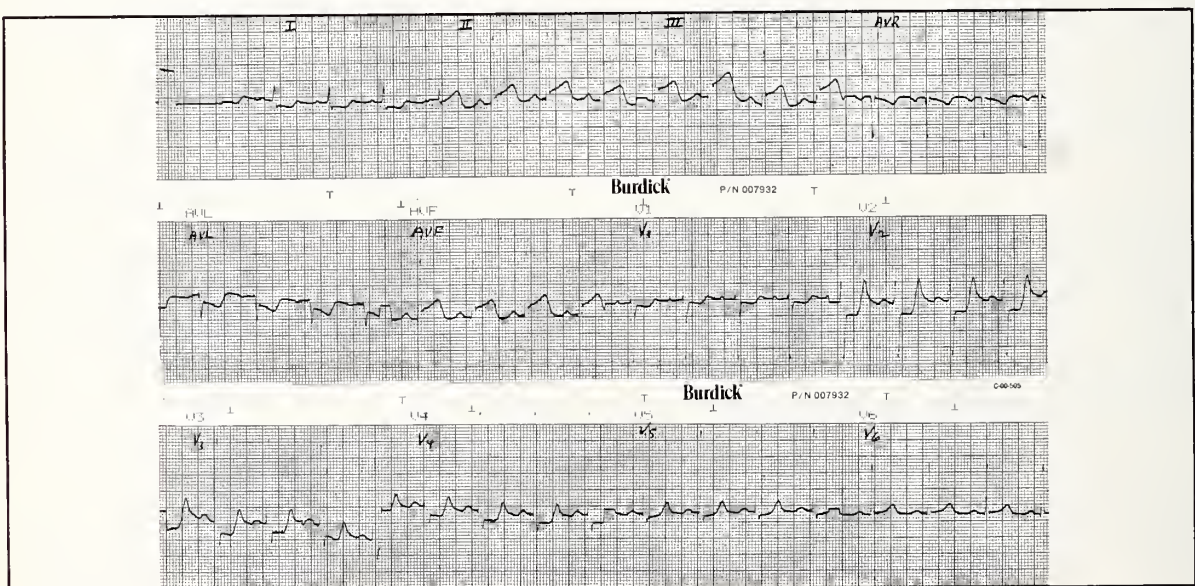
CLINICAL HISTORY:

M. M. is a 60-year-old woman who had presented to the hospital because of crushing substernal chest pain of four hours duration. On examination, the patient was mildly hypotensive, was diaphoretic, and had a prominent ventricular gallop. What do you think of her electrocardiogram?

DISCUSSION:

The patient is in sinus rhythm. Impressive ST elevation is noted in leads II, III, and AVF with equally impressive ST depression in leads I, AVL, and $V_2 - V_4$. The trace is strongly suggestive of inferior infarction. Variant angina could give a similar electrocardiographic appearance.

The feature editor wishes to thank Dr. Banister of Conway, Arkansas for his assistance in this month's feature.



Adenocarcinoma of Lung and Sigmoid Colon

James R. Phillips, M.D., William E. Atkinson, M.D., Harriet A. Farley, LMSW, W. Ducote Haynes, M.D., Jerry L. Prather, M.D., and S. William Ross, M.D.*

Problem

A seventy year-old man presented with a previous diagnosis of squamous cell carcinoma of the right lung, with metastasized to the mediastinum and to the left lung, and with carcinoma of the sigmoid colon for a discussion of his treatment options.

Carcinoma of the right lung was diagnosed in February 1982, and the patient underwent surgical resection. Eight months postsurgery he developed a recurrence in the right mediastinum and underwent radiation therapy. He did reasonably well but developed progression of the disease with enlarging multiple pulmonary nodules in both lungs first noted in February 1986.

Chemotherapy consisting of cis-platinum and 5-fluorouracil (5-FU) was begun in February 1987, and he tolerated this treatment well. Chemotherapy was discontinued due to family emergencies, including his wife's illness and the sudden death of one of his daughters. Plans were made to restart chemotherapy at a later unspecified date.

Approximately two weeks post-chemotherapy, the patient was admitted to the hospital because of severe pain in his right upper quadrant of the abdomen. A 3 x 4 cm malignant sigmoid polyp was found and resected. Post-operatively the patient did well, and he presented to the Second Opinion Panel four weeks later for a discussion on whether to reinstitute chemotherapy for his lung cancer.

Pathology Review William Atkinson, M.D.

A review of histopathology revealed that this patient had poorly differentiated adenocarcinoma (rather than squamous cell carcinoma) of the lung with mediastinal metastasis. The second neoplasm was a mucinous

adenocarcinoma arising in an adenopapillary polyp of the sigmoid colon with tumor invading the stalk.

Diagnostic X-Ray Review Jerry L. Prather, M.D.

Two liver scans were reviewed and appeared negative for metastatic disease. Chest x-rays from July 1986 through April 1987 were reviewed. These showed metastatic disease in both lungs which showed slow but steady progression. Film reviewed after chemotherapy was delivered in February 1987, showed slight reduction in tumor volume, suggesting some response from the treatment. Bone scan that was reviewed showed an area of abnormality in the left hip; however, this might have been secondary to arthritis.

Pulmonary Opinion James R. Phillips, M.D.

This patient had two different adenocarcinomas: cancer of the lung, which was first diagnosed five year earlier, and cancer of the sigmoid colon, which was diagnosed four weeks before the patient presented to the panel. His lung cancer had been treated with surgery, radiation therapy, and one course of chemotherapy. He presented with complaint of slight shortness of breath, but no pain. He could resume chemotherapy and have the lung lesions monitored after two or three courses. If there was regression of the disease, the chemotherapy could be continued, providing there were no serious side effects. Ultimately, chemotherapy could be delayed until more symptoms justified treatment.

Medical Oncology Opinion S. William Ross, M.D.

The patient was asymptomatic when he presented for discussion with the Second Opinion Panel. He reported no chest pain, no increase in shortness of breath, no swelling of feet or ankles, but did admit to having difficulty

*St. Vincent Infirmary Cancer Center, St. Vincent Infirmary, Two St. Vincent Circle, Little Rock, Arkansas.

sleeping well. If he should develop symptoms, chemotherapy would be indicated.¹⁻⁸. Since he had already had one course of cis-platinum, and apparently tolerated it well, significant adverse reactions would not be expected if cis-platinum should be reintroduced.

Radiotherapy Opinion

W. Ducote Haynes, M.D.

It was evident that this patient had wide-spread disease in both lungs. He had already received radiation therapy for his lung cancer in 1982. Radiation therapy was not indicated at that time.

Oncology Social Work Opinion

Harriet A. Farley, L.M.S.W.

The patient presented with an appropriate affect. He was accompanied by his daughter, a registered nurse, who appeared very supportive, and they appeared to be dealing with their stresses well. The patient seemed to cope primarily through intellectualization and attempted to maintain a position of control and responsibility. However, he did experience the general sense of loss of control that accompanies a diagnosis of cancer. One of his major concerns was having to relinquish his role as primary caretaker of his disabled wife. Based upon his responses, a referral was made to an I Can Cope support group in his community. Reading materials on cancer were also provided.

Consensus

The panel agreed that since the disease was progressing slowly and not causing any symptoms, the patient had the option of either continuing with chemotherapy or delaying treatment until he became more symptomatic. The decision was ultimately up to the patient, and he should discuss these options with his physician.

Acknowledgement

The authors wish to thank Marjorie McMinn for her editorial assistance in the preparation of this paper.

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The Logan H. Roots Hospitals: “A Tale of Two Cities”

*Richard B. Clark and Margaret R. Clark**

The name of Logan H. Roots is probably familiar to both recent and long-time residents of the twin cities, as the Veteran's Administration Medical Center in North Little Rock bears his name to this day. What is less well known is that a second hospital, unrelated to the Veteran's Administration Hospital in North Little Rock, was also named for him. This hospital stood in Little Rock from the 1890's to the 1920's and was affiliated with the medical school of the University of Arkansas.

**Dr. Clark is a professor in the Department of Anesthesiology and Obstetrics-Gynecology at the University of Arkansas for Medical Sciences. Mrs. Clark, Dr. Clark's mother, is a long-time resident of Little Rock. This article was first printed in the Pulaski County Historical Review.*

Logan Holt Roots was born in Tamaroa, Illinois, on March 25, 1841. He was a member of the Union Army during the Civil War, serving with Grant in Mississippi, with Smith on the Red River expedition, and with Sherman on the march to the sea. The close of the war found him in Arkansas with the rank of Brevet-Lieutenant Colonel in the Commissary Department.¹ After being mustered out, he invested in a plantation (near DeValls Bluff) and eventually became connected with Merchant's National Bank (later First National Bank of Little Rock). He was always prominently connected with leading financial interests in the state, was a director of the Texas and St. Louis Railroad, and was the largest stockholder of the Southwestern Telegraph and Telephone Company. He has been called the father of the telephone system in the



Southwest.² He was elected to the Fortieth and Forty-first Congresses.³

In 1871, Colonel Roots married Emily M. Blakeslee; they had three daughters - Frances, Miriam, and Lois. Four sons did not survive.⁴ A lover of beauty, he foresaw the need for a quiet place to rest and relax in the heart of the city. Early in 1890, word came from Washington that the Federal Arsenal, located in east Little Rock, would be closed "not later than October 1, 1890".⁵ The suggestion was made that the grounds be used as a city park. At the same time, permanent military posts were being founded throughout the country, and it was proposed that other land in Little Rock be given to the federal government for a new post, in exchange for the Arsenal grounds. The Arsenal grounds became City Park - later renamed MacArthur Park.

This exchange was effected with help from Secretary of War, Stephen Elkinson, Senator James K. Jones, Congressman William L. Terry, and Roots. The site chosen for the new military post was the Big Rock on the north side of the Arkansas River (then part of Little Rock). Pulaski Heights came very near being chosen as the site, but was rejected as the one thousand acres required could not be acquired as one piece of land. Four years after Roots' death in 1893, the new post was named Fort Logan H. Roots in his honor.⁶

The fort saw many soldiers come and go in the ensuing years, particularly during the Spanish-American War and during the border troubles in Mexico, when Pancho Villa's notoriety was at its height. In 1917, it became an officers training camp with the probability that the U. S. would enter the war in Europe.⁷ It is very likely that General Ira C. Eaker, who was later to organize the Eighth Air Force in England in World War II, had his initial officer's training there.⁸ In June 1917, Little Rock was selected as the site of a division camp which relieved the pressure on Ft. Roots. This camp, Camp Pike, trained many American soldiers for World War II. The fort became the location of a Veteran's Administration hospital in 1921, and the facility was transferred to the Veteran's Bureau in 1922.⁹ Since then it has undergone several renovations. Today it is the Veteran's Administration Medical Center, Ft. Roots, North Little Rock, a medical and psychiatric treatment center for the veterans of Arkansas and neighboring states.

The second facility to bear the name of Logan H. Roots was initiated by the generosity of his widow. In 1895, Mrs. Roots donated a large sum of money for the construction of a city-owned hospital.¹⁰

A medical school needs a teaching hospital, and the Medical Department of the Arkansas Industrial University (the forerunner of the University of Arkansas College of Medicine) which opened in Little Rock in 1879, had none. Although patients, who could be used for instruction, were available from several sources - from the "hospital" conducted by the Ladies Benevolent Asso-

ciation of Little Rock (actually a small infirmary, it was organized during the Brooks Baxter War of 1874 and located behind the Old State House on Water Street); from the Little Rock Infirmary (opened in 1888 by the Sisters of Mercy, it became St. Vincent's Infirmary in 1900); and from the county hospital which opened in 1883 - the situation was not ideal.¹¹

In response to these limiting conditions, the widow of Colonel Roots offered \$10,000 from his estate in late 1895 for the construction of a city-owned hospital.¹² (Although clearly stated to be \$10,000 in the announcements of the 1890's,¹³ the amount was reported to be \$100,000 by 1959. Also in the later article, the Colonel's rank had risen to General.¹⁴ Monies, and rank it seems, are magnified by age!) The gift was accepted by the City Council,¹⁵ and construction was begun on land donated by the Arkansas Industrial University next to the medical school at Second and Sherman Streets.¹⁶ Thus, neither the land nor the building was of any expense to the city. The Logan H. Roots Memorial Hospital was received by the city in December 1896 and was described by the Gazette in great detail.

*"The administration building is 40 x 60 feet with brick portico. The front of the building bears a tablet with the following appropriate motto, 'To God and the Stranger Forever', and the frieze of the portico has the inscription, 'Logan H. Roots Memorial Hospital', inscribed in stone. The building is two stories high and contains the following rooms and apartments: office and reception room combined, physician's room, receiving room for patients, dining room, dispensary, nurse's room, operating room, two linen closets, two bathrooms, kitchen, store-room, and pantry. In addition, there are two ward service rooms opening into the connecting corridor. The ward building and connecting corridors are two stories in height, the corridor lying between the other two buildings. The ward on the first floor is 25 x 28 [feet], together with two separate ward rooms 10 x 12 1/2 [feet]. In the middle of the ward and extending from the foundation to the roof is a double open fireplace for the purpose of assisting ventilation. The bathroom and lavatories are in the connecting corridor, and so arranged that no odor or sewer gas from plumbing fixtures can reach the building. This is accomplished by means of a turret into which the doors from the lavatories and corridor open. The second stories of the ward and corridor are duplications of the first. The exterior grouping and general architectural features of the buildings present a pleasing and harmonious appearance. It will accommodate seventy-five patients comfortably."*¹⁷

Funding was initially a problem. Contributions were accepted, and a "City Hospital Fund" totaled \$2,504.15.¹⁸ The hospital struggled along for years until it closed in 1924 with the opening of a new City Hospital at Twelfth and McAlmont Streets. In 1926, it was converted into a

fire station.¹⁹ Today, the area around Second and Sherman Streets is bare, having been cleared for an entrance ramp for Interstate Highway 30.

Thus, the name of Logan H. Roots persists to this day in the Greater Little Rock area, although one of his two monuments no longer exists. Nevertheless, the legacy of this outstanding individual, who saw neither of his memorials, continues to benefit the populace of Arkansas and nearby areas.

Notes

1. Emily M. Roots, In Memoriam: Logan H. Roots. Located at the Little Rock Public Library.
2. Charles Allbright, "Remember A Name (Daughter Recalls Logan H. Roots for Whom VA Hospital is Named)". *Arkansas Gazette*, April 26, 1959, Sunday Magazine, p. 1.
3. Roots, In Memoriam.

4. Ibid.
5. Clifton E. Hull, "The Saga of the Beginning of Ft. Roots". *Arkansas Gazette*, March 12, 1972, Sect. E, pp 5-6.
6. Ibid.
7. Ibid.
8. Thomas F. Coffey, Decision Over Schweinfurt: The U. S. Eighth Air Force Battle for Daylight Bombing. (David McKay Co, Inc., 1977).
9. Hull, "Beginning of Ft. Roots".
10. *Arkansas Gazette*, December 10, 1895, p. 1.
11. W. David Baird, "Medical Education in Arkansas". (Memphis, Memphis State University Press, 1979.)
12. Ibid.
13. *Arkansas Gazette*, December 10, 1895, p. 1; February 4, 1896, p. 6.
14. Allbright, "Remember a Name".
15. *Arkansas Gazette*, December 10, 1895, p. 1; February 4, 1896, p. 6.
16. *Arkansas Gazette*, February 18, 1896, p.2.
17. *Arkansas Gazette*, December 3, 1896, p. 5.
18. *Arkansas Gazette*, January 30, 1898, p. 7.
19. Baird, "Medical Education in Arkansas".

MEDICINE IN THE NEWS

AMA: Peer Review Chilled

In an unanimous opinion the U.S. Supreme Court recently ruled that hospital peer review committees do not have immunity from antitrust suits brought by physicians they have disciplined.

The high court ruling reversed a U.S. Court of Appeals decision in the closely watched Astoria, Oregon, Patrick vs. Burget case. It restored a \$2.2 million award for Timothy A. Patrick, M.D., an Astoria surgeon who resigned from the city's only hospital after its peer review committee had acted to terminate his staff privileges upon concluding that his care of patients did not meet the hospital's standards. The jury had granted an award of \$650,000 which the trial judge tripled under provisions of the Sherman Antitrust Act.

In bringing legal action, Dr. Patrick contended that the peer review committee had acted because he was a competitive threat.

The AMA had filed an amicus brief supporting immunity of peer review. In response to the Supreme Court decision, Kirk Johnson, J.D., AMA's General Counsel issued this statement:

"The American Medical Association is disappointed to learn of the Supreme Court decision in the case of Patrick vs. Burget.

The decision allows a \$2.2 million anti-trust verdict to stand against some Oregon physicians whom a jury found to have engaged in restraint of trade and improper medical staff peer review.

The AMA is concerned that the decision will have a chilling affect on physicians and their willingness to participate in the peer review process - a process critical

to maintaining quality health care. What it really points out to physicians is the need to follow proper peer review procedures to lessen the possibility of challenges. Notwithstanding the decision, the AMA believes that where peer review is done in good faith and fairly there is no significant anti-trust risk for physician reviewers."

In overturning the trial court's decision the appellate court said that Oregon hospital peer review committees were exempt from antitrust action under the state action doctrine since their activities were "closely supervised" by state officials. It said this exemption was applicable even though it described actions of some of the peer review committee members as "shabby, unprincipled and unprofessional."

The Supreme Court said, however, that this state supervision is not so close that it qualifies for a "state action" exemption.

Concern of the AMA, other medical groups and the defendants that effective peer review would be greatly hindered by lack of antitrust immunity, Justice Thurgood Marshall said in his opinion, should be "properly directed to the legislative branch." He called attention to the fact that Congress through the Health Care Quality Improvement Act of 1986 has provided immunity for certain peer review activities, but only when such a committee acts "in the reasonable belief that the action was in the furtherance of quality health care," and is carried out in good faith.

In response to the Patrick case decision, the Joint Commission of Accreditation of Health Organizations (JCAH) said that hospitals must not be deterred from continuing "good faith, vigorous peer review."

In a public statement, the JCAH emphasized that the high court's decision is "narrowly focused" and should not dissuade hospitals from continuing their essential peer review activities.

"This decision will not affect the JCAH's commitment to the peer review process as an essential element of efforts to enhance quality of care," it said. "The Patrick case is not a reason to stop conducting good faith, vigorous peer review if it is guided by carefully crafted administrative procedures which reflect consultation with expert counsel."

When a peer review committee makes an objective determination that medical care has been improperly delivered, it should take whatever disciplinary action is appropriate, the JCAH said.

AMA's office of the General Counsel is now studying the Patrick case decision so that it may be guided in determining what statutory language should be developed to provide essential "state action" protection to those physicians involved in the peer review process.

OSHA Standards for Chemical Exposure

Physicians having employees who may be exposed to hazardous chemicals should be alerted to the fact that they must comply with the Occupational Safety and Health Administration's (OSHA) Hazard Communication Standard (HCS), which was effective May 23. The HCS was expanded to cover all employers as of that date.

The standard previously was not applicable to physicians and certain other employers, who now must prepare a written communication program advising their personnel of chemical hazards that exist in their employment settings. Employers must:

1. Keep warning labels on containers.
2. Obtain material safety data sheets (MSDS) which must be made available to their personnel.
3. Train all employees about their exposure to chemical hazards and proper safeguards.

Drugs in solid, final form for direct administration to patients are excluded by the HCS. Presently, liquid oral and injectable drugs also are excluded since issues concerning them have not yet been resolved by OSHA and the Office of Management and Budget (OMB).

The OSHA standard was published in the August 24, 1987 *Federal Register* (pgs. 31852-31886). Physicians wishing to consult with OSHA about interpretations of the standard should contact OSHA's Terry Mikelson at (202) 523-6027 or contact the nearest OSHA office.

AZT Approved

AZT (brand name Retrovir), an antiviral for the treatment of HIV infections (AIDS) was approved by the Arkansas Medicaid Pharmacy and Therapeutic Commit-

tee (P & T) May 31. The action made Arkansas the 48th state to approve the drug for Medicaid patients.

Third Annual Cancer Camps

The Arkansas Division of the American Cancer Society and Med Camps of Arkansas are once again sponsoring summer camp for children with cancer at Camp Aldersgate in Little Rock from August 7 - 12.

This is the third year for Cancer Camp which is open to 35 children ages six to sixteen. There is no charge to attend the week long camp which includes traditional camping activities such as hiking, swimming, and fishing.

The camp is equipped with an infirmary and a full-time nurse. Medical management programs are continued in accordance with the campers' physician. Morris Kletzel, M.D., of the Arkansas Children's Hospital, will provide the necessary medical support and consultation.

Any child who has had cancer is eligible to attend the camp, however, those who have never attended Cancer Camp will be given first priority.

For additional information regarding Cancer Camp, please contact the Arkansas Division of the American Cancer Society Medical Affairs department by calling 664-3480.

Leukemia Group Seeks Grant Applications

The Leukemia Society of America is accepting applications for 1989 grants in basic science and clinical level research of leukemia and related diseases.

Three awards are being offered: Scholar grants totalling \$200,000 for five years to researchers with five years or more experience who have demonstrated their ability to conduct original investigations; Special Fellow grants totaling \$87,000 for three years for researchers in the intermediate stages of career development; and Fellow grants of \$70,500 for three years for promising investigators with minimum or no prior experience.

A Ph.D., M.D., or equivalent degree is required of all candidates. Awards are not given to individuals who are receiving full institutional salary support.

The deadline for applications is September 1. Only one application in each grant category may be submitted from each faculty sponsor. Proposals for all categories of grants will be evaluated on a competitive basis by the Leukemia Society's Grant Review Subcommittee in late January 1989. Applicants should use only the most current forms to apply for grants.

Funding for all grantees will begin on July 1, 1989.

For application forms and additional information, write to the Research Grant Coordinator, Leukemia Society of America, 733 Third Avenue, New York, NY 10017.

NEWSMAKERS

Chester W. Peeples, M.D. was recently honored for 31 years of service to the Crittenden County Hospital and the community of West Memphis. Dr. Peeples was presented a plaque by Dr. Glenn Schoettle on behalf of the hospital association and the board of governors. Dr. Peeples was a former chief of staff at the facility.

The Caduceus Club honored **M. Joycelyn Elders, M.D.**, with the Distinguished Alumnus Award. The award is given to a graduate of the UAMS College of Medicine who has made notable contributions to the field of medicine. Dr. Elders, a 1960 graduate of the University of Arkansas for Medical Sciences, is a pediatrician and the director of the state Health Department.

After 40 years of service to the Bentonville community, **John A. Rollow, M.D.**, has decided to slow down. Dr. Rollow retired July 1 and is planning to travel and play golf. Dr. Rollow is a family practitioner and began practice in 1948.

The Arkansas Society of Plastic and Reconstructive Surgeons recently elected **Eugene Still, M.D.**, as their president for the 1988-89 year. Dr. Still is the medical director at Crawford Memorial Hospital in Van Buren and was the founder of the first plastic/cosmetic surgery clinic in Northwest Arkansas.

Dr. Clyde Glover was named to the Honorary Board of Governors of the Baptist Medical System Foundation. Dr. Glover is a North Little Rock radiologist.

Dr. Robert Watson, the president of the History of Medicine Associates and a retired neurosurgeon, recently spoke to a group at the dedication of a bronze plaque which was erected at one of the sites of the original Arkansas College of Medicine. The college, now part of the UAMS system, was first located at 113 West Second Street in the Sperindio Hotel from 1879 to 1890. The History of Medicine Associates has erected plaques at the school's four former locations.

NEW MEMBERS

BOONE COUNTY MEDICAL SOCIETY

Crider, James T., Family Practice, Harrison. Born August 21, 1955, Paragould. Pre-medical education, Arkansas State University, B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1983. Residency, UAMS (AHEC - Northwest). Practice experience, Sparks, NV, 2 years. Board certified.

Kuharich, Richard M., Ophthalmology, Harrison. Born December 11, 1936, Chicago, IL. Pre-medical education Northwestern University, Evanston, IL; B.S., 1959. Medical education, Northwestern University Medical School, 1969. Internship, Madigan General Hospital, Ft. Lewis, WA. Residency, University of Kentucky, Lexington. Practice experience, Harrison, 13 years. Board certified.

CHICOT COUNTY MEDICAL SOCIETY

Beavers, Homer K., Internal Medicine, Lake Village. Born October 29, 1957, Lake Village. Pre-medical education, University of Arkansas, Monticello, B.S., 1980. Medical education, University of Arkansas for Medical

Sciences, 1984. Internship/Residency, UAMS. Board certified. Member, American College of Physicians.

DREW COUNTY MEDICAL SOCIETY

McKiever, William R., General Practitioner, Monticello. Born March 23, 1955, Monticello. Pre-medical education, University of Arkansas, Monticello, B.S., 1971. Medical education, University of Arkansas for Medical Sciences. Internship, Pensacola, FL. Practice experience, Ocean Springs, MS, 2 years; DeQueen 4 years; Monticello 2 years. Member, SMA, AMA.

OUACHITA COUNTY MEDICAL SOCIETY

Brunson, Milton E., Obstetrics/Gynecology, Camden. Born April 19, 1947, Searcy. Pre-medical education, University of Arkansas, Little Rock, B.A., 1974/1976. Medical education, University of Arkansas for Medical Sciences, 1980. Residency, UAMS. Practice experience, 2 years Camden. Board certified. Member, AMA, American College of OB/GYN.

POPE COUNTY MEDICAL SOCIETY

Ampil, Federico Laurel, Therapeutic Radiology, Russellville. Born February 28, 1943, Manila, Philippines. Pre-medical education, University of Santo Tomas, 1960. Medical education, University of Santo Tomas, 1967. Internship, Albert Einstein Medical Center, Philadelphia. Residency, University of Cincinnati Medical Center. Practice experience, 3 years Wheeling, WV; 3 years Springfield, MO. Practice experience, Associate Professor, Louisiana State University School of Medicine, Shreveport; Assistant Professor of Radiology, West Virginia University School of Medicine. Board certified.

PULASKI COUNTY MEDICAL SOCIETY

Bauer, F. Michael, Cardiothoracic Surgery, Little Rock. Born August 2, 1955, Rochester, NY. Pre-medical education, University of Arkansas, Fayetteville, B.S., 1980. Medical education, University of Arkansas for Medical Sciences, 1981. Internship/Residency, Strong Memorial Hospital, Rochester, NY; Fellowship in Cardiothoracic Surgery, Strong Memorial Hospital. Board certified.

Brizzolara, John P., Urology, Little Rock. Born November 13, 1947, Little Rock. Pre-medical education, University of Arkansas, Little Rock, B.A., 1972. Medical education, University of Arkansas for Medical Sciences, 1980. Internship/Residency, UAMS. Practice experience, Brook Army Medical Center, San Antonio, 2 years; Irwin Army Hospital, Ft. Riley, KS, 1 year. Board certified.

Satre, Richard W., Radiology, Little Rock. Born July 7, 1951, Sheboygan, WI. Pre-medical education, University of Wisconsin, Milwaukee, B.A., 1978. Medical education, Medical College of Wisconsin, Milwaukee, 1982. Internship/Residency, St. Joseph's Hospital, Milwaukee; Duke University Medical Center, Durham, SC; and Johns Hopkins Hospital, Baltimore, MD. Board certified.

St. Amour, Thomas E., Radiology, Little Rock. Born October 15, 1953; Chicago, IL. Pre-medical education, University of Illinois, B.S., M.S. Medical education, University of Chicago, 1984. Internship/residency, Mallinckrodt Institute of Radiology, Washington University School of Medicine. Board certified.

ST. FRANCIS COUNTY MEDICAL SOCIETY

Alkire, C. C., Orthopaedic Surgery, Forrest City. Born February 2, 1954, Houston. Pre-medical education, Louisiana State University, Baton Rouge, B.S., 1976. Medical education, LSU Medical Center, Shreveport, 1980. Internship/Residency, University of Texas Health Sciences Center. Board eligible.

TRI-COUNTY MEDICAL SOCIETY

Campos, Louis, Family Practice, Calico Rock. Born February, 1942, New Orleans. Pre-medical education, Louisiana State University, B.S., 1967. Medical education, LSU School of Medicine, New Orleans, 1972. Internship/Residency, Baton Rouge. Practice experience, Donaldsonville, LA, 1 year; St. Francisville, LA, 7 years; Agnes AR, 1 year; Calico Rock, 2 years. Board eligible.

UNION COUNTY MEDICAL SOCIETY

Payson, Tony A., Psychiatry, El Dorado. Born June 20, 1952, Japan. Pre-medical education, University of Texas, Austin, B.A., 1979. Medical education, University of Texas Health Sciences Center, San Antonio, 1983. Internship/Residency, UTHSC. Military record, U.S. Army 1973-76. Member, American Psychiatry Association.

WASHINGTON COUNTY MEDICAL SOCIETY

Higginbotham, Jr., William E., Urology, Fayetteville. Born December 4, 1948, Memphis. Pre-medical education, University of Arkansas, B.A., 1972. Medical education, University of Arkansas for Medical Sciences, 1975. Internship/Residency, UAMS. Practice experience, Little Rock, 3 years; Fayetteville, 5 years. Board certified.

RESIDENT MEMBERS

McNamara, Gregory M. Born December 7, 1954, Buffalo, NY. Pre-medical education, Union College, Schenectady, NY, B.S., 1977. Medical education, University of Medical Sciences, San Juan, Puerto Rico, 1982. Internship, State University of New York, Stony Brook. Residency field of study, neurology.

Watch for our August issue - It includes a facinating question and answer session with a man who maintains that his right to die was violated for 14 months while he was in a Texas hospital.

IN MEMORIAM

DR. FRANK M. ADAMS

Frank M. Adams, M.D., age 78, died Sunday, May 22, 1988. Dr. Adams, a retired internist, was from Hot Springs.

Dr. Adams was a resident of Hot Springs for 50 years and had practiced there since 1936. He retired in 1983. He was a life member of the Arkansas Medical Society, and was a past president of the Garland County Medical Society. Dr. Adams was also a former president of the Ouachita Memorial Hospital.

Survivors include a son, John Adams of Hot Springs; a daughter, Olivia Anne Almon of Jacksonville, Florida; and a sister, Mrs. W. Alvin Rogers of Marion, South Carolina.

DR. CHARLES W. RASCO, JR.

Dr. Charles W. Rasco, Jr., a retired family physician, died Wednesday, May 18, 1988. He was 81.

Dr. Rasco, a life-long resident of DeWitt, was very active in community affairs. He was a member of the school board City Council. He was a life member of the Arkansas Medical Society, current president of the Fifty Year Club, and a long-time member of the Arkansas County Medical Society.

Survivors include his wife, Achsah Hudson Rasco; two sons, Charles William Rasco III of DeWitt and Robert Hudson Rasco of Dermott; a daughter, Jane Rasco Foltz of Fort Smith; a sister, Frances Rasco Chambers of Little Rock, five grandchildren and a great-grandchild.

*Memorials honoring Arkansas Medical Society members and their families can be made to the Medical Education Foundation for Arkansas (MEFFA),
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EDITORIAL

*I. Dodd Wilson, M.D.**
Dean, UAMS College of Medicine



It is a pleasure to serve on the Editorial Board of the *Journal of the Arkansas Medical Society* as the representative from UAMS. The opportunity to write periodic editorials will allow me to discuss issues important to the College of Medicine, to our students and to Arkansas physicians. In this issue, I address the need for scholarship funds for our students.

Over the past decade, there has been a fall nationally in the number of applicants for medical school positions. In Arkansas, this drop has been precipitous. We now have about 1.5 applicants from Arkansas for each position, about half the number we had as recently as five years ago. Many factors are involved in this decline. Some relate to the more hostile climate in which medicine is practiced. The publicity surrounding the perceived "glut" of physicians undoubtedly has been important. In addition, there is a declining cohort of 23-year-olds now that we are leaving the peak of the baby boom. Other careers, such as business and law, are becoming relatively more attractive. An additional major impact on the falling pool of applicants undoubtedly reflects concerns regarding the economic rewards associated with being a physician. Potential applicants read about the high level of educationally-incurred debt, the high costs of malpractice insurance and the efforts to constrain physician income. All of this occurs paradoxically when, because of medical advances, the physician's ability to intervene effectively in the patient's care is increasing rapidly.

One of many implications of a falling applicant pool is that it will force medical schools to decrease class size, which is already gradually being done. While this will be considered by many readers to be a good outcome, Arkansas law makes reduction of our class size difficult. We are committed to working with the Legislature to reduce the numbers of physicians we are mandated to educate. The national debate over the number of physicians being educated is now being affected by concern that there will actually be too few physicians in the early 21st century.

Regardless of the correct approach to the number of medical students, the falling pool of applicants will reduce the overall quality of physicians being educated. This decline in quality comes when the complexity of

medical practice is increasing rapidly and when our need for highly competent physicians has never been greater.

It is important to separate the numbers issue from the quality issue. Regardless of whether we are educating too many physicians or possibly not even enough physicians, we must have highly qualified individuals entering the nation's colleges of medicine. Many physicians with whom I have discussed this issue are unable or unwilling to separate the need for quality from the debate over the number to educate. It is important to recognize that, even if the numbers of physicians being educated were drastically reduced, the numbers leaving the educational pipeline will not be affected for a decade.

A major problem in our recruitment is the extensive debt burden that most medical students acquire. In the 1986-87 year, 412 (77%) of our medical students received \$4,000,000 of financial aid. Eighty-four percent of that was given as loans. The total indebtedness of our class that graduated in 1988 was \$3,800,000. For the ninety-nine graduates with loans, the average indebtedness was over \$38,000. A number of our students have debt well over \$60,000. Including interest, these students will pay back approximately three times what they have borrowed. For example, one student who borrowed \$84,000 will owe \$230,000. Early in practice, it is likely that 15% of the student's income will go to repay the loan, and there is no longer an interest deduction from federal and state income tax.

The University of Arkansas College of Medicine needs more scholarship support for its students. While it is essential to attract good people into medicine, it is also important to provide for the needs of individuals in our classes. My hope and request is that you will wish to help. Scholarships have been given by individuals, businesses, clinics, medical associations, alumni, foundations, and as memorials. You may give by 1) making a direct contribution to either the College of Medicine or the Arkansas Caduceus Club, designated for a scholarship, 2) add to a prior scholarship, 3) give through the AMA-ERF Fund and designate the University of Arkansas as your recipient, 4) give through your clinic, or 5) consider making a bequest in your will. It is for a good cause which will benefit students in need, the profession itself, and ultimately the people in their care.

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DON'T USE SNUFF OR CHEWING TOBACCO.



**ROSALYN P. STERLING-SCOTT, M.D.**

Assistant Professor of Surgery, UCLA School of Medicine and Drew University of Medicine and Science, Los Angeles

Associate Surgeon, Department of Cardiovascular & Thoracic Surgery, Centinela Hospital Medical Center, Los Angeles

Major, U.S. Army Reserve

EDUCATION Rensselaer Polytechnic Institute, Troy, NY, B.S. Chemistry; NYU School of Medicine, New York, M.D.

RESIDENCY Boston University School of Medicine (Cardiovascular); Saint Vincent's and St. Claire's Hospitals, New York City (General Surgery)

FELLOWSHIP First Mary A. Fraley Cardiovascular Surgical Research Fellow at the Texas Heart Institute, Houston

OUTSTANDING ACHIEVEMENTS Author of numerous articles, including "Indications for Early Bypass Grafting Following Intracoronary Streptokinase"; author of "The Female Surgeon—Dawn of a New Era," chapter in *A Century of Black Surgeons—The U.S.A. Experience*; Board of Directors, Association of Black Cardiologists; Secretary, Drew Society

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Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg b.i.d. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindication: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H₂-receptor antagonists.

Precautions: General—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.
2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests: False-positive tests for urobilinogen with Multistix[®] may occur during therapy with nizatidine.

Drug Interactions: No interactions have been observed between Axid and theophylline, chloridazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility: A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice; although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement

compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C:—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers:—Nizatidine is secreted and concentrated in the milk of lactating rats. Pups raised by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

Pediatric Use:—Safety and effectiveness in children have not been established.

Use in Elderly Patients:—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs <0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events were also reported; it was not possible to

determine whether these were caused by nizatidine.

Hepatic:—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular:—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

Endocrine:—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic:—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H₂-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

Integumental:—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

Other:—Hyperuricemia unassociated with gout or nephrolithiasis was reported.

Overdosage: There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous LD₅₀ values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

Axid[®] (nizatidine, Lilly)



Eli Lilly and Company
Indianapolis, Indiana
46285

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AMS Special Committee on AIDS

William N. Jones, M.D., Chairman

Update: August 1988 Synopsis of CDC Reports as Published in the Morbidity and Mortality Weekly Reports

Donald C. Fournier, M.D.*

Introduction

Recent reports from the Centers for Disease Control (CDC) will be briefly reviewed concerning Human Immunodeficiency Virus (HIV) Infection in the United States. The specific reports will be listed in the references found at the end of this discussion.¹⁻³

This information was obtained by the CDC in conjunction with the National Institute of Health (NIH), the National Institute on Drug Abuse (NIDA), and the Department of Defense (DOD). The various sources include epidemiologic teams, health departments, various federal agencies, blood collection agencies, and various medical institutions.

Since there has only been one case of HIV Type 2 (HIV-2) infection reported in the United States, which was acquired in the United States, this discussion will primarily be directed towards the experience with HIV Type 1 (HIV-1) infection. This is not to infer that HIV-2 infection is not important, because since 1986, 627 persons infected with or seropositive to HIV-2 have been reported in various articles.⁴ Of these, 604 or 96% have occurred in West Africans. Forty-two have developed AIDS and 12 have symptoms of AIDS-Related Complex (ARC). It appears that the transmission of this virus is identical to HIV-1, indicating that it is probable that this virus will eventually be transmitted to the United States. HIV-2 is currently present in Africa, Europe, and South America.

Review of the Trends in AIDS^{1,2}

Over 56,000 cases of AIDS have been reported in the United States with nearly 32,000 resulting in death.* This was almost 10,000 more cases than what was reported at the end of 1987. In the past twelve months, the CDC

reports almost 24,000 cases of AIDS, an increase of 58% over the previous year. These cases were primarily among homosexual and bisexual men (68%) and among heterosexual men and women with a history of intravenous drug abuse (19%). An estimated 4% of cases were felt to be from heterosexual transmission. Unfortunately, the CDC reports that the 416 cases of AIDS reported in children under 13 years of age represents an 85% increase from the previous year. However, these numbers represent only 92% of the original number projected to occur in the year 1987 by the Public Health Service. This data is still consistent with the estimated number of HIV infected persons in the United States to be from 1 million to 1.5 million.

With what is currently known about the progression of HIV infection to AIDS, it is felt that the projected cumulative incidence of AIDS will be approximately 270,000 diagnosed cases by the end of 1991. The major limitation in making these estimates is that there is an unknown population at increased risk for HIV antibody prevalence. If one is to look at the blood donor and military applicant data, the HIV antibody prevalence is indeed low in this population, thus it is underrepresentative of those at increased risk.

In any event, most experts agree that anywhere from 1 million to 1.5 million infected persons will be found to be present in the United States. No new data has become available to prompt a change in this estimate.

HIV infection prevalence (seropositivity) appears to be highest in the Hemophilia A population with estimates of approximately 70% of tested persons being positive. Hemophilia B patients have an incidence of approximately one-half of this, reflecting an obvious need for fewer treatments with clotting factor and conse-

* Member, AMS Committee on AIDS; 2435 College Drive, Suite 5; Texarkana, TX 75501.

* These figures were reported in the AIDS Weekly Surveillance Report from the CDC, June 6, 1988.

AIDS IN ARKANSAS 1988

January 1 - July 21, 1988

Total number of cases reported		56	CASES BY AGE GROUP	
Number of deaths		20	Less than 20	0
			20 - 29	18
			30 - 39	26
			40 - 49	6
			50 - 59	2
			60 or more	4
CASES BY SEX				
Male		51		
Female		5		
CASES BY RACE				
White		42		
Black		14		
CASES BY RISK GROUP				
Homosexual/Bisexual*		32		
IV Drug User		2		
Hemophiliac		1		
Transfusion		4		
Heterosexual		3		
NIR#		4		
OPPORTUNISTIC DISEASE				
			Pneumocystic Carinii	28
			Kaposi's Sarcoma	2
			Pneumocystis Carinii and Kaposi's Sarcoma	2
			Other	24

* Of the 32 homosexual/bisexuals, 10 are/were IV drug users

No identified risk group (NIR)

* Of the 32 homosexual/bisexuals, 10 are/were IV drug users

No identified risk group (NIR)

AIDS IN ARKANSAS

1985 - 1988

Total number of cases reported		146	CASES BY AGE GROUP	
Number of deaths		79	Less than 20	0
			20 - 29	49
			30 - 39	64
CASES BY SEX			40 - 49	22
Male	136		50 - 59	5
Female	10		60 or more	6
CASES BY RACE			OPPORTUNISTIC DISEASE	
White	115		Pneumocystic Carinii	74
Black	31		Kaposi's Sarcoma	6
CASES BY RISK GROUP			Pneumocystis Carinii and Kaposi's Sarcoma	5
Homosexual/Bisexual*	87		Other	61
IV Drug User	16			
Hemophiliac	1			
Transfusion	6			
Heterosexual	5			
NIR#	5			

* Of the 87 homosexual/bisexuals, 25 are/were IV drug users

No identified risk group (NIR)

quently less exposures to HIV contaminated factor concentrates. This seroprevalence rate will probably decrease as our factor concentrates have now been screened for HIV antibody and are heat-treated to inactivate the virus.

The next group with the highest HIV infection prevalence includes homosexual and bisexual men. Their incidence from various surveys ranges from 10% to as high as 70%. Most studies have shown between 20 and 50% of this population show seropositivity. The highest prevalence rates have been found in a cohort of homosexual men in San Francisco. These surveys have been conducted among patients at sexually transmitted disease clinics, and few data is available on the true prevalence of infection among homosexual and bisexual men in general who are not seeking medical care.

Intravenous drug users have a varied prevalence rate depending on the geographic region in which the surveys were conducted. In reviewing 90 studies in 53 cities in 27 states or territories, the CDC reports the rate ranged from 50 to 60% in New York City, to less than 5% in most other areas of the country other than the East Coast and Puerto Rico. However, the CDC points out that this represents only about 15% of the estimated 1.1 million IV drug users in the country. This population is of great concern, since sex partners and children of these IV drug users are also at risk. In fact, this is the source for the great majority of perinatally-acquired AIDS cases. This is most notable when serologic screening of newborns indicates the prevalence of infection in New York City was over 3% in some parts of the city, whereas rates were 0.2% outside of New York City. Overall, in the state of New York, the results of 52,326 tests for HIV antibody prevalence was 0.8%. They estimated that 1 woman in 61 giving birth in New York City had HIV antibody. Approximately 40% of these women passed the infection to their newborns.

The last group of high risk or high prevalence HIV antibodies includes heterosexual sex partners of HIV infected persons. The prevalence of infection among this population ranges from 10% to as high as 60%. It is not clear why there are such great differences in the different reported levels of infectiousness of source partners, but obviously other factors may be coexistent. There is not yet sufficient data to definitely evaluate these differences. The CDC reports that limited seroprevalence data from heterosexual partners of high risk persons in general, of unknown HIV status, indicate much lower risks, ranging from 0 to 11%.

HIV Prevalence in the General Population

In various reports cited and reviewed here, the CDC has summarized information on HIV seroprevalence in various groups adjusted where possible by sex, age, and race or ethnicity. The information in the supplemental report produced in December of 1987¹, related informa-

tion from blood donors, civilian applicants for military service, job corps entrants, sentinel hospital patients, and newborn infants and women of reproductive age. Some of the information on women of reproductive age was included in the high risk group from the inner-cities, as previously outlined in the New York area and Puerto Rico experiences. These particular groups were felt to underrepresent the high risk population for AIDS, but did give some type of prevalence detection of HIV infection among groups representative of the general population.

Since 1985, all blood donors have been screened for HIV antibody, and the overall prevalence rate for first time donors from the period of 1985 to 1987 has been 0.043%. In a more selected population of 12.6 million American Red Cross blood donations between April 1985 and May 1987, the prevalence of HIV infection was 0.20%. The American Red Cross reports that the overall level has declined to 0.12% by mid-1987. They also report that 80 to 90% of those positive donors interviewed had recognized risk factors for infection. Likewise, those individuals who are applying for military service who have a history of drug use and homosexual activity are screened by recruiting officials. They are excluded from entry into the military service and no medical evaluation is performed.

For this reason, those applicants who are screened for HIV antibody are indeed at a lesser risk than the general population. They do underrepresent the IV drug users and homosexual and bisexual men. They also underrepresent those patients with coagulation disorders. In screening 1,253,768 applicants between October 1985 and September 1987, the overall prevalence of HIV infection among the military applicants was reported to be 0.15%. The percentages were highest among various racial and ethnic minorities who obviously appeared to be overrepresented in this group. Also, most applicants were male. Among active duty U.S. Army personnel who had been tested more than once, 7.7 per 10,000 per year have become infected since their first test was performed.

All branches of the military are currently monitoring their active duty and reserve populations in a likewise fashion. Job Corps entrants also have been screened as part of the medical evaluation for participation in various training programs. IV drug addicts are not accepted, but no other entrance restrictions exist. Of the first 25,000 entrants tested, the incidence of HIV positivity was 0.33%. They estimate that approximately 60,000 a year will be tested and feel that this will represent mostly disadvantaged youths ranging from 16 to 21 years of age. Obviously, this population will overrepresent the ethnic minorities from both the inner-city and the rural poor.

The CDC has initiated a survey of various hospitals throughout the United States where non-self-selected segments of the general population will be screened for HIV seropositivity. Of the first 12,000 individuals tested

NEW REGULATIONS AFFECTING PHYSICIANS

The Arkansas Department of Health has recently passed several regulations in the area of Communicable Disease that have been motivated by the AIDS epidemic:

1. HIV positivity has become a reportable condition.
2. If a person who is HIV positive intentionally spreads the virus, there are certain actions the health department can take.
3. A toe tag must be attached to a dead person who is infectious for a blood-borne infection.
4. Anything you transfuse or transplant into a patient from another human must be negative for hepatitis and HIV.
5. If an emergency response person is exposed to body fluids, you are required to tell the health department if the patient has any known infection in that body fluid.

A copy of the Arkansas Physician Bulletin with the complete regulations can be obtained by contacting Dr. Tom McChesney at 661-2597.

HIV POSITIVITY

On 15 June 88, HIV antigen or antibody positivity became reportable by name and address. You should report this condition in the same way as other reportable disease. Call 1-800-482-8888 and your report will be recorded on an answering machine in the Epidemiology Program. Written reports can be mailed to J. P. Lofgren, M.D., Medical Director, AIDS/STD Program, Arkansas Department of Health, 4815 W. Markham St., Little Rock, AR 72205; (501)661-2795.

The reporting of HIV positivity was approved by the AIDS Advisory Committee of the Arkansas Department of Health and the Arkansas State Board of Health. Although the information will be used for statistics, the main reason for requiring the reporting of HIV positivity is to be able to do contact tracing.

INTENTIONAL SPREADERS OF HIV

If you are aware that a person who knows that he/she is HIV positive is still engaging in conduct (such as sex without the use of condoms or sharing needles) which is likely to cause the transmission of HIV, you may report this to the health department. The Director of the Health Department may wish to order the patient to cease and desist such conduct. If the patient continues, the health

department may turn the case over the prosecuting attorney in the county of residence of the patient.

This area of law is evolving and thus it is unclear under what law the person would be prosecuted.

TOE TAG

If your patient is infectious for HIV, Hepatitis B, Hepatitis non-A, non-B, Tularemia, Rabies or Plague at the time of death, you are required to attach a red tag to the big toe of the right foot. This tag does not need to state the infectious disease but indicates to the funeral home that the blood is infectious.

TRANSFUSION/TRANSPLANTATION

No blood or blood products can be transfused into a patient unless found to be non-infectious for Hepatitis B virus or HIV. Also, you cannot transplant any tissue or organ unless the donor has been tested and found to be non-infectious for Hepatitis B and HIV.

EMERGENCY RESPONSE

If an emergency response employee (ERE) is exposed to the body fluid of the patient, they may call the Health Department. If the type of exposure could have spread an infectious agent, the Health Department will call the patient's physician and the physician is obligated to state whether the patient is infectious for anything that could spread through this type of exposure. The Health Department will then give recommendations back to the ERE. Because of confidentiality, the Health Department will not tell the ERE the information received from the physician (though often the ERE will be able to guess from the recommendations that he receives). The ERE is requested to share these recommendations only with those who need to know, such as his/her spouse or his/her physician.

If you know (because, for example, the Health Department talked to you or you saw the ERE with his hands covered with blood) that an ERE was exposed to an infection, and you later discover that the patient was probably infectious, you are to call the Health Department.

If your patient is being transported and you are aware that the patient is infectious, you are required to inform the ERE. You do not need to state the specific disease, but only what body fluid is infectious, so that the ERE can take extra precautions.

in a blinded fashion, the prevalence was 0.3%. The prevalence range from various institutions was 0.09% to 0.89%.

At present, the CDC plans to enlist 40 various hospitals from 30 cities to be enrolled in this particular screening survey by September of 1988. Other hospital programs that the CDC has reported include the experiences in Massachusetts, where 30,708 tests in 1986 and 1987 revealed an average prevalence of infection of 0.21% for child-bearing women. These varied from 0.8% for women delivering in an inner-city hospital to 0.09% at suburban and rural hospitals. The New York experience was reported earlier in this discussion.

This information reveals various prevalence rates throughout the United States that may differ according to geographic locations and even locations within different cities themselves. This somewhat represents various risk factors of those particular metropolitan areas.

Another proposed program the CDC is recommending at this time is to test college students from various private and public institutions, in a blinded fashion, to determine what prevalence is present in this segment of the population. This was to have begun in April of 1988. It is expected that further reports from the CDC will be forthcoming and give us detailed prevalence rates throughout the United States.

HIV Prevalence in Special Settings

In June of 1987, the Federal Bureau of Prisons implemented an HIV testing program and had tested 29,193 inmates as of April 1988. They found 843 were positive for HIV antibody, making the prevalence rate 2.9%. The CDC reports that it is going to plan further surveys in conjunction with the National Institute of Justice over a ten state area beginning in June of 1988. This will give us further insight into a high risk population.

Another high risk population which the CDC reports are prostitutes, who have an increasing incidence of HIV positivity that parallels the geographic pattern of AIDS cases for women in general. However, since IV drug use is common among prostitutes and they have multiple sexual exposures, their risk is greater than that of the general population in most cases. In fact, those prostitutes who admit or acknowledge IV drug use have an incidence of HIV antibody prevalence that is three to four times higher than among prostitutes who do not use IV drugs. In general, female prostitutes seroprevalence data reveals a rate that varies from 0 to 45%, with the highest rates occurring in the inner-city where IV drug use is more common.

Another special situation which the CDC has identified as having an increased prevalence of HIV infection includes tuberculosis patients. One study cited from Dade County, Florida found that 19% of 276 tuberculosis patients were infected with HIV. Other studies show that

the HIV seroprevalence has ranged from 0 to 50% in tuberculosis patients. The CDC has recommended that tuberculosis patients be tested for HIV antibody and that HIV antibody positive persons be tested for tuberculosis. With the active tuberculosis programs currently ongoing in Arkansas, it will be interesting to see what the HIV prevalence is found to be here.

Demographic Aspects of HIV Infection

All studies cited by the CDC in the MMWR reports indicate that HIV antibody prevalence is disproportionately higher in urban areas throughout the United States. The same pattern is seen with overt AIDS cases reported to the CDC. The highest levels have been observed in California, in the Northwest, with somewhat lower levels observed elsewhere.

The age ranges of HIV infection prevalence generally follow those of sexually active adults and IV drug users. HIV infection first becomes appreciably present in the mid- to late teens with an increase and peak in the late 20's and 30's. It then declines over the next two decades.

Cumulatively, males account for 13 times greater incidence of AIDS cases per million population than for females. Among military applicants, the ratio is 5.5 to 1, among blood donors 4.6 to 1, and among sentinel hospital patients 2.3 to 1.

In most instances, heterosexual adults and adolescents, the ratio is 2.9 to 1, males to females. The incidence of AIDS cases is disproportionately high among blacks, with a general ratio of 3 to 1 compared to whites. When one excludes homosexual and bisexual men with AIDS, however, the ratio of AIDS case incidence is 12 to 1 for blacks, and 9.3 to 1 for Hispanics, respectively, as compared with whites. It is felt that this is representative of the higher rate of IV drug use among black and Hispanic groups.

HIV infection prevalence among persons without increased risks remain very low. Heterosexual transmission is most likely to occur in areas with highest rates of AIDS and HIV infection among IV drug users. In many studies cited by the CDC in the various MMWR reports, a major percentage of those persons found to be seropositive did have recognized risk behavior factors that had not been previously recognized or acknowledged on initial evaluation.

Reportedly, nine surveys in six major cities where HIV infection risk was evaluated through interview, with the opportunity to re-interview seropositives, infection prevalence ranged from 0 to 1.2% among persons without identified risk factors.

In simultaneous surveys of homosexual patients at the same clinics, the prevalence of positive antibodies to HIV ranged from 12 to 55%. It is felt that further studies at sexually transmitted disease clinics will show further in-

sight to HIV infection risks among the heterosexual population.

AIDS/HIV Among Health Care Workers³

In this report from the MMWR, the CDC has occupational information on almost 47,533 of the AIDS cases, with 2,586 or 5.4% classified as health care workers. It is estimated that 5.7% of the U.S. labor force was also employed in health services, representing a similar proportion.

It appears that 46 states, the District of Columbia, and Puerto Rico have reported health care workers with AIDS. Of these, 91.6% were male, as compared to 92.4% of other patients with AIDS; 62.8% of the health care workers with AIDS are white, as compared to 60.5% of other patients with AIDS. About 95% of these health care workers with AIDS were found to be in categories of known high risk, including homosexual or bisexual men, intravenous drug users, combinations of the first two categories, coagulation disorders, or blood component recipients.

Reportedly, 215 health care workers initially were labeled as undetermined risk. One hundred and twenty-one were further investigated, and 80 were found to have further risk factors that were not previously identified (66.1%).

The CDC recognized 135 health care workers who still were determined to have no risk category. Of these, 41 could not be reclassified after follow-up evaluation and another 20 had either died or refused to be interviewed; 74 are still under investigation as to the true possibility of undetermined risk category.

Overall, the CDC reports 5.3% of health care workers with AIDS had no known risk factors, representing 10% of all reported AIDS patients with an undetermined risk category. Again, 41 could not be reclassified after investigation. Of these 41, eight are physicians (four surgeons), one dentist, five nurses, and a variety of other paramedical personnel usually present in a hospital setting. Reportedly, two persons had no contact with patients or clinical specimens.

The CDC feels that the occupational risks of acquiring an HIV infection or AIDS in the health care setting is still low. It appears to be most often associated with percutaneous inoculation of blood or body fluids from an infected patient.

In this issue, CDC summarizes the results of 870 workers with parenteral exposure to blood who were tested greater than 90 days after exposure. Four or 0.5% were found to be positive for HIV antibody. Interestingly, one had exposure to an HIV positive sexual partner, and the heterosexual acquisition of infection could not be ruled out.

They reported further on data from 1,176 health care workers who had been followed and tested for HIV antibody as an ongoing surveillance of health care workers.

All of these had been exposed to blood or body fluids; 104 via the mucous membranes or non-intact skin to blood. Ninety-six had exposure to other body fluids such as saliva, urine, or an unknown source. Their numbers indicate that of 489 workers who experienced parenteral exposure and who were followed for seroconversion to within six months of exposure, only three converted to seropositivity (0.6%); none of other exposures converted.

In the same issue of the MMWR, reports of a prospective study by the NIH in where 103 health care workers are being followed who sustained needlestick injuries, as well as 691 health care workers with more than 2,000 cutaneous or mucous membrane exposures to infected body fluid, show none have seroconverted to date. Similar studies from the University of California were also cited where only one person had seroconverted after a needlestick. This included 235 health care workers with 644 documented needlestick injuries. Further studies were cited from the United Kingdom.

In summary, the current evidence suggests that a risk of conversion to HIV antibody positivity following a needlestick injury is less than 1%. Risk of seroconversion following exposure to non-intact skin or mucous membranes is felt to be much less. Again, the CDC emphasized the need for universal precaution when caring for all patients.

Summary

These reports which were briefly reviewed contain considerable data about AIDS in the United States. The quarterly reports will also appear in the *Journal of the American Medical Association* as they are made available from the MMWR. The May 13, 1988 report was the most recent report reviewed. An additional MMWR supplement appeared April 1, 1988.⁵ In addition, an article concerning current aspects on AIDS is found in the April, 1988, issue of *Immunology and Allergy Clinics of North America*.⁶

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Doctors and Dependency

Joe L. Martindale, Chairman
AMS Physicians' Health Committee

As we practice medicine in our communities we are in daily contact with our colleagues. We notice and comment when one has lost or gained weight, if he is limping, seems dyspneic or shows any other symptom which might be indicative of deteriorating health. We have genuine concern for our colleagues' heart disease, diabetes, hypertension, ulcer, and malignancy and we offer our help freely and unsolicited. How would we react if we were the sole person that knew one of our colleagues suffered from AIDS and was still practicing? I feel that we would deal with the problem head-on.

There is another disease that effects 12-14% of us which is ignored, and even enabled, by most of us. That disease is chemical dependency. It has definite signs and symptoms and is treatable. Treatment is far more successful when the diagnosis is made early. The recovery rate is far higher than many of the diseases our colleagues suffer from and which we give so much attention to. Most treatment programs for physicians state an 85% recovery rate. This is excellent. But first, we have to get them there.

By the time chemical dependency shows up in the work place, it is in its late stages. By the time you see us we are abusing our families verbally and sometimes physically. Our children are doing poorly in school or running afoul of the law themselves. Our wives are in therapy and our social lives are zero.

There have been many instances when we come to the hospital acting strangely, are late for scheduled appointments, displayed inappropriate behavior, and smelled of alcohol. These symptoms are usually passed off by nurses, colleagues, and hospital administrators, "Doc is having a bad day." By doing this, we are denying our colleagues and friends the treatment they need and deserve. In many instances we are sentencing them to death or suicide.

The Arkansas Medical Society Physician' Health Committee is ready and willing to help. We are only as far away as your telephone. Please learn all you can about chemical dependency and equip yourselves with the knowledge and skills you need to help your chemically dependent colleague. Then take action for his sake.

This committee exists because we care and are willing to give our time to help. Any reports are strictly confidential and are thoroughly investigated prior to intervention. We are professionals and conduct our work on a professional level. We cannot help our colleagues without your help.

One Physician's Story

I am a recovering alcoholic and addict. Perhaps after you read this brief account of what happened in my life, you will recognize yourself and seek help earlier than I did.

As far back as I can remember, I wanted to be a doctor and my goal was set at a very early age. I pursued my goals and attained them all without much difficulty. I made the usual sacrifices that we all make when we pursue medical careers.

I did not drink in high school and consumed very little alcohol in college. In medical school we managed enough money to have a dance once a month and I usually got drunk. I noticed early on that when I drank, I always wanted more and I usually ended up embarrassing my wife and myself. I didn't give this phenomenon much thought because I thought this was normal. I also thought that medical students and doctors were supposed to be party people. I liked the glamour of the parties and thought that this was a mark of success. I used some amphetamines to stay awake during exams but that was the extent of my drug use until much later.

Following my internship, I completed my two-year military obligation where drinking was a casual and occasional occurrence. I always drank too much, again to the embarrassment of my wife and our friends. Even then, attempts to control my drinking were unsuccessful.

"I was broke, my family had rejected me and I was too sick to work. I still did not think I was an alcoholic."

After military service, we settled in a mid-size Arkansas town and I opened a family practice office. Success came early and we immediately were taken into the social order of our town. Drinking became a weekly habit. The effects were always the same - too much alcohol and embarrassment. My wife soon tired of this and we started to withdraw from any type of social activities. It took almost five years to reach this point. It took another twelve to thirteen years to see the need for help.

I continued to work, started avoiding my colleagues, had affairs, and worked less. When my patients became ill, I would refer them.

Somewhere in the tenth or twelfth year after arriving in town the effects of my drinking began to affect my children. My wife withdrew from all her clubs and activities other than those necessary "for appearance's sake." My children's friends would not come to our home after school or stay overnight.

By this time I was working less and less, using amphetamines during the day, alcohol and sedatives at night. That routine lasted for almost five years *but I continued to work and care for patients*. Alcohol took me from the respected member of my community and church to the drunk doctor who shot the geese off the country club lake one spring afternoon. I lost my position as a father and husband, but most of all, I lost my self respect. I became a very confused human being. What was happening to me? I should have been able to handle this - after all, I was a doctor.

I soon realized that I could not stop drinking and using drugs on my own but I was too proud to ask for help. I continued to drink and use drugs until my wife had had enough and filed for separation. I was broke, my family had rejected me, and I was too sick to work but I still did not think I was an alcoholic. I still thought that I could do it alone.

I was so depressed that I seriously contemplated suicide. I saw no other way out. A dear friend suggested that I go to a treatment facility and by some miracle I went. My goal was not to get straightened out but only to stay long enough to get my family back.

While there, I learned about the disease of alcoholism and its effects on the family. I began to develop coping skills that I had never had. Finally, it was no longer necessary for me to drink or use drugs. I learned to take care of some of my needs. I became more organized and efficient. Most importantly, I developed a deep love and understanding for my fellow man.

I am now reunited with my family and we all love and respect each other. My practice is very demanding but a lot more fun. Overall, I would say that I have everything that any human being could expect.

Alcoholism and drug addiction can happen to anyone. Admitting our humanity to ourselves and to others does not make us, as physicians, lesser beings in other people's eyes. I believe that I now have more respect from my patients than I ever had. Help is as close as your telephone if you will only use it.

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Pediculosis Capitis: A Review

Susan L. Bratton, M.D. and Susan B. Mallory, M.D.*

Abstract

Head lice are extremely common. Socially, lice evoke disgust and shame among patients and parents. Currently there are several pediculicidal medications which offer the physician new choices in treatment modalities. Some controversy exists concerning evidence of toxicity in children, and a need exists for treatment standardization. This paper reviews the treatment options and epidemiology of *Pediculus Humanus Capitis*.

Introduction

Man has suffered with lice throughout history. In Exodus 8:17, Aaron "smote the dust of the earth and it became lice in men and in beast". Aristotle described spontaneous generation of lice from flesh. He thought the organisms escaped to the surface through pustules. One medieval Swedish town even chose its mayor with a louse! The potential candidates leaned forward with their beards touching a table top. A louse was allowed to choose between the potential candidates; then the winner furnished his beard as the louse's adobe.

The importance of lice has been clearly established in transmission of disease. *Pediculus humanus corporis* (body lice) is the vector of epidemic typhus (caused by *Rickettsia prowazekii*) and epidemic relapsing fever (caused by *Borrelia recurrentis*). *Pediculus humanus pubis* and *Pediculus humanus capitis* on the other hand, are not generally considered to be vectors of disease. However, Murray and Torrey were able to infect head lice with *R. prowazekii*. They identified antigen to the bacterium by indirect immunofluorescent staining in the louse feces.¹ Although only a theoretical risk, some concern has been raised by the possibility of the spread of acquired immunodeficiency syndrome by blood feeding parasites, but this has not been proven.

Epidemiology

Pediculosis capitis or head lice is a common problem. In 1984, approximately three million American house-

holds were infested with head lice. Community wide epidemics have forced temporary school closings in 1984 in Anderson, Indiana, and Barnsdall, Oklahoma in 1981, to name a few.¹

Juranek at the Centers for Disease Control studied elementary school children in New York, Florida, and Georgia in 1973-74.² Black students showed a 0.3% incidence of infestation, while white students averaged eleven percent. Girls consistently had a higher rate of infection even when the data were corrected for hair length. Previously, it had been thought that long hair accounted for the higher incidence in females. The greatest risk of infestation is in the siblings of an infected household member. Of affected children, 59% have a family member with lice. Evaluation of socioeconomic status demonstrates a 26% rate of infestation in low-income children compared with 10% of middle to higher income children. This difference could be related to larger families, crowded housing, poor hygiene, and decrease access to medical care.

Pediculosis capitis is an obligate human parasite which can survive away from its host under optimum conditions only for seven days.³ Most researchers consider the actual survival to be only two to three days. Only 10% of eggs will hatch after exposure to temperatures less than 22°C even if later incubated at 30°C, which is the optimal temperature for hatching.²

Lice are not equipped to jump and require some means of direct contact. In one study,² combs and brushes were not found to be significant risk factors. However, shared lockers, unassigned coat hooks, and riding a school bus were risk factors. Bus riders demonstrated a 12% rate of infection compared to 8% for non-

*Department of Pediatrics, Arkansas Children's Hospital, 800 Marshall, Little Rock, Arkansas 72202.

TABLE I. Environmental control for lice infestation.

- 1. WASHING OF CLOTHING.** At the time of therapy, machine wash all linens and clothing that have been used in the previous two days. Hot water should be used (125°F) or clothes should be dried in a hot dryer for at least twenty minutes.
- 2. NON-WASHABLE ITEMS.** Personal articles which cannot be washed should be either stored in a sealed plastic bag for ten days or dry cleaned.
- 3. COMBS AND BRUSHES.** Combs and brushes should be soaked in a pediculicidal shampoo, soaked in hot water, or heated in a dryer.
- 4. FURNITURE.** Rugs and upholstered furniture should be vacuumed but do not need to be fumigated.

riders. The elevated incidence in bus riders was probably because of increased contact time with other infested children. In this study, buses were stored outside during the winter which should have killed any lice and prevented spread. Person to person spread can also be demonstrated when children are allowed to play on the floor and share tables.

Diagnosis

Head lice should be suspected in anyone with pruritus involving the head and neck. Excoriations in the postauricular and occipital regions are common. Crusting and matting of hair signify secondary impetiginization. Enlarged posterior cervical nodes are common even without secondary infection. Pruritus begins about a week after the initial infestation when the host becomes sensitized to the louse saliva. Macular and papular erythematous eruptions and urticarial lesions may also be seen on the trunk.⁴

To confirm an active case of pediculosis, adult lice and/or nits should be found within 6 mm of the scalp. Lice secure their eggs close to the scalp to ensure an agreeable temperature for the eggs to develop. Hairs grow approximately 0.4 mm per day, and the nits hatch in seven to ten days. A nit further than 6-7 mm from the scalp may be considered either hatched or dead,¹ but should be examined microscopically for verification.

A patient will harbor an average 12-24 lice. Lice are ivory-tan and measure 2-4 mm in length. They leave deposits of brown excrement which can be recognized by careful observation. Each louse lays approximately 6 eggs per day, and lives up to three months. The nits (eggs) measure 0.8-1.0 mm and hatch within 7-10 days

into nymphs, which look like adults but cannot reproduce. This stage lasts about one week.

The diagnosis of pediculosis capitis can be confirmed by finding live lice or by demonstrating nits under a low power microscope. Wood's Lamp will demonstrate unhatched eggs as pearly white oval structures, while hatched eggs are gray. Once the diagnosis is secured, several treatment options are available.

Therapy

Therapy must include measures to simultaneously treat infested household members and the environment. The Centers for Disease Control recommend the measures detailed in Table I for environmental control.¹

Lindane 1% (gamma benzene hexachloride) has been the standard therapy since 1948. Treatment requires a ten-minute shampoo which should be repeated in one week. All infested family members should be simultaneously treated, whether symptomatic or not.³

Lindane has recently come under scrutiny because of central nervous system toxicity demonstrated by seizures and muscle spasms. High concentrations of lindane have caused bone marrow suppression, aplastic anemia, and seizures. Lindane 1% has been used approximately 24 million times before 1979. During this period the Federal Food and Drug Administration collected 35 cases of possible toxic reactions. Kramer examined the FDA cases and found that only 26 involved the use of Lindane 1% for lice or scabies.⁶ Of these cases, four were related to inappropriate therapy for pediculosis. Only one case involved the appropriate use of medicine for lice treatment. This risk has been considered a very low for such a large population treated.

Feldmann and Maibach demonstrated that 9.3% of topically applied Lindane is systemically absorbed.⁷ Humans using 30 ml. of 1% Lindane will absorb about 5 mg/kg, assuming a 10% absorption. Lindane can accumulate in the brain because of its lipophilic properties, and may persist up to two weeks. After a single application, peak blood levels occur at six hours. By 24 hours the level decreases to half, and by 48 hours, one quarter is left.⁸

Pregnant women and neonates should not be treated with Lindane. Infants have a decreased hepatic ability to conjugate drugs, a large surface area to volume ratio, and run the risk of oral contact with treated skin. Parents should be warned not to allow infants to lick their skin or place medicine in their mouths. In addition, certain areas of the body have an increased absorptive ability, especially the scrotal skin which may absorb ten times as much as forearm skin.⁹

The International Agency for Research on Cancer¹⁰ and the United States Environmental Protection Agency have claimed that Lindane is oncogenic, and can cause hepatomas in mice. Thorp and Walker also reported an increased number of liver hepatomas in mice.¹¹ How-

ever, the dosages used in these studies were beyond the maximum tolerated doses in humans, and the strain of mice used has a high rate of spontaneous liver tumor development. Studies by Fitzhugh have not demonstrated an oncogenic effect.¹²

A final concern with Lindane is the possibility of louse resistance. No case of resistance has been reported in the United States. Parish¹³ reviewed three "resistant" European cases and found that each case actually used subtherapeutic doses of Lindane. Two cases failed to concurrently treat other household members. They concluded that treatment failures were caused by noncompliance or reinfestation, and not Lindane resistance.

An alternative treatment to Lindane is Pyrethrin, an extract from the chrysanthemum *Cinerariaefolium*. A ten-minute shampoo with Pyrethrin and repeat shampoo one week later is adequate therapy. Extensive absorption studies have not been performed, but the LD₅₀ in mammals for oral doses is 820-1500 mg/kg. Topical applications are well below these oral doses. Excellent pediculocidal activity has been demonstrated.¹⁴

A third treatment option is Malathion, an organophosphate cholinesterase inhibitor. It is metabolized more rapidly in mammals than in insects, and no inhibition of blood cholinesterase activity in humans has been demonstrated.¹⁵ The most prominent adverse reaction is stinging when applied to excoriated lesions. Malathion is not as cosmetically elegant as either Pyrethrin or Lindane. Malathion should be applied until the hair is moist, allowed to dry naturally, and left on for 8-12 hours. Taplin¹⁶ applied Malathion or its vehicle for 12 hours and reported no live lice at 24 hours. One week later, only three of the 65 Malathion-treated patients had lice, as compared to 26/47 vehicle.

Another topical treatment option is 10% Crotamiton (Eurax). Adequate therapy requires the location to be rubbed into the scalp and left on for 24 hours. Karacic and Yawalker¹⁷ evaluated 49 patients treated for pediculosis, capitis, using a single dose. Ninety-six percent were cured, and only two patients required a second application. Absorption studies are unavailable to evaluate safety in pregnant women and small children.

Outside the United States, the World Health Organization recommends NBIN, which is a combination of 68% benzyl benzoate, 6% DDT, 12% benzocaine, and 14% polysorbate 80, diluted in water prior to application.¹⁰ This formula is inexpensive, readily available in third world countries, but less cosmetically pleasing than other previously mentioned methods.

Treatment of eyelash pediculosis can be challenging. This offending louse is usually the pubic louse and a diligent search should be made for pubic lice on the patient or within the family. Petrolatum rubbed on the eyelashes and lids, three to five times a day is the treatment of choice. Other treatments previously mentioned are too irritating.

When should a child return to school after therapy for pediculosis capitis? Nits (eggs) which are firmly cemented to hair shafts are difficult and tedious to remove. Children should return to school the day after initial therapy. Adequate compliance to treatment regimens should be encouraged by school nurses, especially when medications have poor ovicidal activity and require second application in one week. Effective nit removal would prevent reinfestation and transmission to others. Currently the best method of nit removal remains scissor excision of individual hairs or combing with a fine tooth comb.

Summary

Pediculosis is a common problem, seen mainly in children. Adequate treatment and followup will help keep the incidence down and school attendance up.

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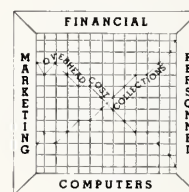
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Thrombotic Thrombocytopenic Purpura: The Importance of Aggressive Treatment

*Jacob Amir, M.D., F.A.C.P.**

Introduction

Thrombotic Thrombocytopenic Purpura (TTP) is a life-threatening microangiopathic disorder which is characterized by thrombocytopenic purpura, fever, renal disease, hemolytic anemia, fluctuating neurologic symptoms, and frequently, leukocytosis.¹ Pathologically, there are subendothelial and intraluminal deposits of "hyaline" material in arterioles and capillaries. These deposits are composed of platelet aggregates and small amounts of intermixed fibrin.² Left untreated, this syndrome almost invariably follows a rapid, progressive, and fatal course. This case report will illustrate the importance of aggressive treatment in the management of TTP.

Case Report

A 30-year-old woman presented to her family physician with a low-grade fever, muscle pain, and weakness of six days' duration. Her past history was unremarkable. She was found to be thrombocytopenic and was admitted to a local hospital, where corticosteroids were begun. Several days later, she developed anemia and was referred to a Little Rock hospital. On admission, examination revealed an alert, well-nourished, but pale-appearing woman. There were numerous petechiae and ecchymoses over the trunk and extremities. Physical exam did not detect lymphadenopathy or splenomegaly.

Laboratory data included: hemoglobin 7.5 G/100 ml; hematocrit 21%; reticulocytes 27%, WBCs 12,500 with 51% neutrophils. In addition, lymphocytes were at 34%; stab cells 10% and 5% metamyelocytes. Peripheral smear showed severe poikilocytosis, anisocytosis, schistocytes, and helmet cells. Basophilic stippling was striking. Many normoblasts were seen. The platelet count was 7,000/cu.mm. Bone marrow aspirate revealed erythroid

hyperplasia, with increased megakaryocytes. The urinalysis showed 2+ protein, 15-20 white blood cells, and 10-12 red blood cells per high power field. The blood urea nitrogen was 41mg/100ml; plasma bilirubin was 2.7mg/100ml with unconjugated fraction of 2.3; lactic dehydrogenase (LDH) was 1,400 mU/ml; haptoglobin was 3mg/100ml; and direct and indirect Coomb's were negative.

The diagnosis of thrombotic thrombocytopenic purpura was made on the basis of all the presenting symptoms. The patient was immediately started on plasma exchange using fresh frozen plasma at 50 ml/kg; Dipyridamole, 100mg. four times daily; acetylsalicylic acid (ASA), 900 mg. four times daily; and Prednisone, 50mg twice daily.

After four days of treatment, the platelet counts remained extremely low at 10,000/cu.mm. Lactic dehydrogenase (LDH) remained elevated at 2,400 mU/ml. On the fifth day, she suffered three grand mal seizures. CT scan of the brain was found to be normal. In view of the ominous development of central nervous system involvement, emergency splenectomy was performed. The spleen weighed 140 gm and contained hyaline occlusions of small arteries and capillaries. The plasma exchange continued for the next two days and the platelet count gradually rose. By the third day after surgery, platelet count was 100,000/cu.mm. The LDH fell from 2,800 to 1,400 mU/ml, then to normal. Hemoglobin stabilized at 12 G/100ml, the fever subsided, and the patient was discharged seven days after surgery. She continued taking Dipyridamole and ASA over the next month.

At present, the patient is in complete remission and has had no recurrence of disease.

Discussion

The clinical presentation of this patient with the additional histologic evidence of the spleen showing typical hyaline occlusions of capillaries and small arterioles con-

*Little Rock Diagnostic Clinic, 10001 Lile Drive, Little Rock, Arkansas 72205.

firmed the diagnosis of thrombotic thrombocytopenic purpura. Hemolytic-uremic syndrome, (HUS) which is similar pathologically, could have been considered; however, the acute onset, elevated temperature, and widespread disease mitigated against this diagnosis.³

The majority of patients with TTP are between 20 and 50 years of age. Approximately two-thirds of those are female. The presenting symptoms may vary greatly from one patient to another, however, purpura is usually present, with evidence of hemolytic anemia, different neurologic abnormalities, renal dysfunction, and fever. Leukocytosis is almost invariably present. If not treated appropriately, the vast majority of such patients will develop acute renal failure, severe hemolytic anemia, or cerebrovascular accidents, with fatal outcome.

The pathogenesis of TTP is still controversial. Various theories suggest that the disease is the result of widespread platelet thrombi;⁴ platelet thrombi caused by non-specific endothelial injury;⁴ subendothelial deposition of an abnormal material with associated disruption of the elastica and microaneurysm formation.⁵ A more recent theory suggests that a failure of prostacyclin production by injured vascular endothelium leads to the increased platelet aggregation and consumption.⁶

Numerous treatment modalities have been used to treat this devastating disease including heparin sodium;⁷ splenectomy (either alone or in combination with high-dose steroids);^{8,9} hemodialysis;¹⁰ and antiplatelet drugs.^{11,12} Other treatments used involve exchange transfusion;¹³ plasma infusion,¹⁴ plasmapheresis and plasma exchange,¹⁵ prostacyclin,³ and vincristine sulfate.¹⁶ All of these modalities have been used in different combinations. Recently, plasmapheresis and plasma exchange with corticosteroids and antiplatelet drugs have been accepted as the first line of treatment for TTP.¹⁷ Splenectomy is the most viable option if such treatment is not effective.^{18, 19} Platelet transfusion should be avoided in TTP, as it may aggravate the thrombotic process.^{20,21}

Despite aggressive plasma exchange, Prednisone, ASA, and Dipyridamole administration, the condition of the case report patient continued to deteriorate. Her LDH continued to climb and platelet counts remained low, usually considered to be poor prognostic signs. Therefore, when grand mal seizures developed on the fifth day, she underwent emergency splenectomy - the turning point in her recovery. Patients should be carefully monitored for an extended period of time after recovery as cases of chronic relapsing TTP have been reported.^{22, 23}

Since TTP is a potentially fatal disease, all patients should receive immediate aggressive treatment with plasmapheresis and plasma exchange, steroids, and antiplatelet drugs. If the patient does not respond to this treatment, emergency splenectomy should be done. In this way, the vast majority of patients with TTP may be successfully treated.

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ELECTROCARDIOGRAM OF THE MONTH

W. C. Roberts, M.D.
John W. Watson, M.D.
UAMS Division of Cardiology
Little Rock, Arkansas

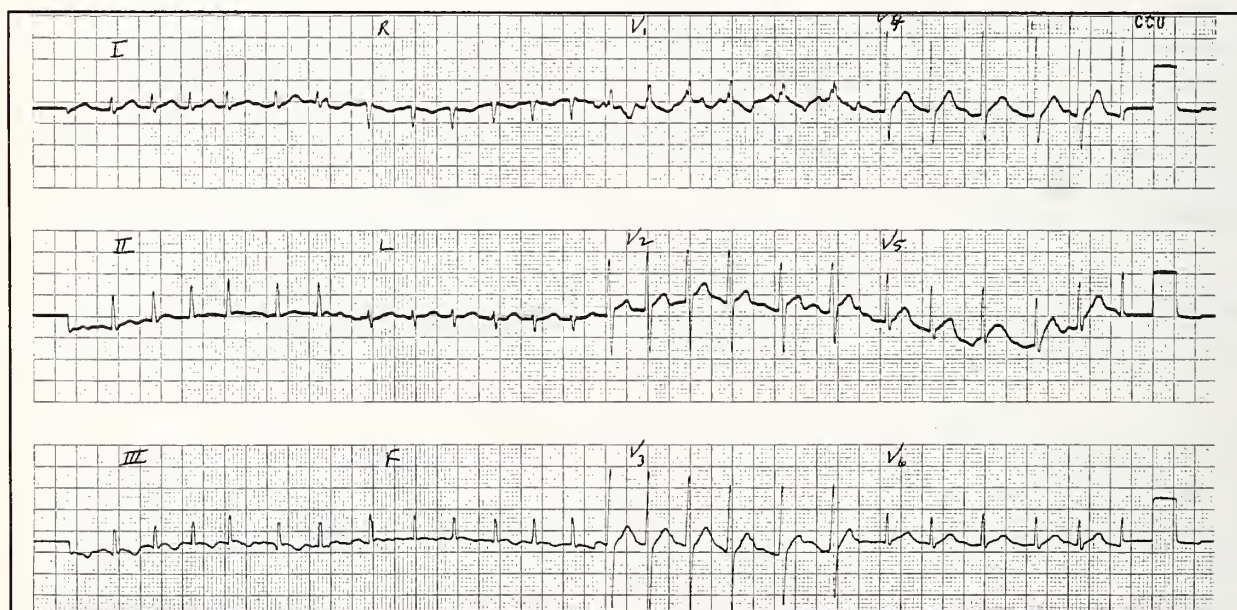
CLINICAL HISTORY:

B. R. is a 47-year-old man who has presented for evaluation of shortness of breath on exertion. On physical examination, S_1 was accentuated and a rumbling diastolic murmur was present. What do you think of the ECG?

DISCUSSION:

The ECG shows atrial fibrillation with ventricular resonance about 140/minute. A prominent R-wave with ST-T deflection is noted in V_1 . Nondiagnostic ST-T changes are noted elsewhere. The trace hints at the presence of RVH and the patient's physical examination hints at the possibility of mitral stenosis. Echocardiography would stand as a reasonable test to contemplate as a part of the diagnostic evaluation.

The editor wishes to thank Dr. Roberts of Conway, Arkansas for his contribution to this month's feature.



Treatment of Recurrent Hodgkin's Disease

*S. William Ross, M.D., William E. Atkinson, M.D.,
Donald R. Harris, M.D., and Jerry L. Prather, M.D.**

Problem

A fifty-year-old woman with a previous diagnosis of recurrent Stage II-A Hodgkin's disease presented to the Second Opinion Panel for a discussion of her treatment options.

In November 1984, the patient noted some swelling in her left axilla, but had no fever, chills, night sweats, or weight loss. Biopsy of the left supraclavicular and axillary lymph nodes three months later revealed Hodgkin's disease, nodular sclerosing type.

The patient was treated with upper mantle radiotherapy, completing treatment in April 1985. Her medical records indicated that no evidence of residual disease occurred for two years. Biopsy of her left neck in April 1987 showed Hodgkin's disease, recurrent in the radiation-treated field.

The patient received six courses of MOP-BAP (nitrogen mustard, vincristine, procarbazine, bleomycin, doxorubicin, prednisone). She completed chemotherapy in September 1987 and remained disease free until biopsy in December 1987 revealed recurrent Hodgkin's disease in a left neck lymph node. She was placed on another chemotherapy regimen, consisting of carmustine and vinblastine. Half doses were given due to her low platelet count.

The patient reported that chemotherapy was scheduled to continue following her presentation to the Second Opinion Panel, and she desired an evaluation in her case.

Pathology Review

Dr. Atkinson

In February 1985, biopsy of left supraclavicular and axillary lymph nodes revealed Hodgkin's disease nodular sclerosing type. In April 1987, excisional biopsy of a left cervical lymph node was positive for recurrent Hodgkin's disease. In December 1987, excisional biopsy of lymph node from left neck showed recurrent Hodgkin's disease. A review of three bone marrow needle biopsies taken between February 1985 and August 1987 showed no evidence of

granulomas, Hodgkin's Disease, or other infiltrative disease. A needle biopsy of the liver taken in August 1987, was also negative for the disease.

Diagnostic X-Ray Evaluation

Dr. Prather

CT scans of the abdomen showed no abnormalities except a slight enlargement of the spleen.

Radiation Therapy Opinion

Dr. Harris

A review of the patient's records indicated that radiation therapy was the initial treatment when Hodgkin's disease was first diagnosed in February 1985. Since recurrent Hodgkin's disease was diagnosed two years post-therapy, the disease would probably respond to repeat radiation, but it would probably not be permanently controlled by additional radiation therapy. In addition, complications would be more likely if the patient were retreated with radiation therapy.

Medical Oncology Opinion

Dr. Ross

It is generally believed that patients with Hodgkin's disease who relapse after radiotherapy for localized disease have a good outlook with first-line combination chemotherapy regimens such as MOP (nitrogen mustard, vincristine, procarbazine, prednisone) and ABVD (doxorubicin, bleomycin, vinblastine, dacarbazine). Since this patient had recurrent Hodgkin's disease in a pre-irradiated area after receiving MOP-BAP, it is unlikely that a second-line combination chemotherapy regimen would bring about a cure. More than likely treatment would be used to control the disease.

The regimen consisting of carmustine and vinblastine is an appropriate chemotherapy to use following the failure of preferred regimens. Use of autologous bone marrow transplant with other high dose chemotherapy regimens with or without involved field radiation could be considered.^{1,2}

*St. Vincent Infirmary Cancer Center, Two St. Vincent Circle, Little Rock, Arkansas 72205.

In other studies, ^{3,5} CEP (lomustine, etoposide, and prednimustine) was used on patients resistant to MOP and ABVD; MIME (methyl-GAG, ifosfamide, methotrexate, etoposide) was used as treatment for recurrent Hodgkin's disease; and a regimen of lomustine, etoposide and methotrexate was used as third-line chemotherapy for resistant Hodgkin's disease.

In this patient's case, the reduced dosage of carmustine and vinblastine due to persistent low peripheral blood counts will make the regimen less effective. Correction of hypersplenism might allow full doses of chemotherapy. Splenectomy might help but might also further reduce the patient's immune response. Other measures include prednisone (which the patient has already had) or danazol. Interleukin 3 and/or 4, if available in the future, might raise the peripheral blood counts.

Consensus

The panel agreed that the current proposed regimen is usually well-tolerated and affords a way to try to control the disease at a non-toxic level. However, at the proposed half dosage, it will be less effective overall. A splenectomy would be a fair option for this patient in order to raise her peripheral blood counts, making it possible for her to receive full dosage of her chemotherapy. Other options available to raise her blood counts include taking prednisone or danazol.

Because the patient has relapsed two years post-radiation therapy and three months post-chemotherapy (MOP-BAP), any treatment now will most likely be to control, not to cure the disease. It was felt by the panel that the patient was probably resistant to both radiation therapy and MOP-BAP and would not benefit from either therapy if repeated.

Acknowledgement

The authors wish to thank Marjorie McMinn for her editorial assistance in the preparation of this paper.

References

1. William S, Bitran J, Awan A, et al. High dose chemotherapy with thiopeta, cyclophosphamide, carmustine and etoposide with autologous stem cell reinfusion and involved field radiotherapy in patients with relapsed Hodgkin's Disease (annual meeting abstract). Am J of Hematol 1987; A853.
2. Wheeler C, Antin JH, Churchill WH, et al. High dose cyclophosphamide, BCNU and etoposide with autologous bone marrow transplantation in relapsed Hodgkin's and non-Hodgkin's lymphoma: Phase I trial (annual meeting abstract). Am J of Hematol 1987; A1058.
3. Santoro A, Viviani S, Bonfante V, et al. CEP in Hodgkin's disease resistant to MOP and ABVD (meeting abstract). Proc Am Soc Clin Oncol 1987; 6:A783.
4. Hagemester FB, Tannir N, McLaughlin P, et al. MIME chemotherapy (methyl-GAG, ifosfamide, methotrexate, etoposide) as recurrent treatment for Hodgkin's. J Clin Oncol 1987; 5:556-561.
5. Tseng, Jr, A, Jacobs C, Coleman, CN, et al. Third-line chemotherapy for resistant Hodgkin's Disease with lomustine, etoposide, and methotrexate. Cancer Treatment Rep 1987; 71:475-478.

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THINGS TO COME

SEPTEMBER 9

Pediatrics in Family Practice. Presented by Arkansas Children's Hospital. Sturgis Building, Arkansas Children's Hospital. Seven Category I credit hours. Fee: \$75.00. For further information contact Blanche Moore, Continuing Education Director, Arkansas Children's Hospital, 800 Marshall, Little Rock, AR 72202; (501) 370-1481.

SEPTEMBER 21 - 25

Infectious Disease Update. Presented by Arkansas Children's Hospital. Four Seasons Hotel, Ontario, Canada. Twelve Category I credit hours. Fees: \$250. For further information contact Blanche Moore, Continuing Education Director, Arkansas Children's Hospital, 800 Marshall, Little Rock, AR 72202; (501) 370-1481.

OCTOBER 30

Physician Leadership Institute. Four week course: Week 1, October 30 - November 4, 1988; Week 2, February 26 - March 3, 1989; Week 3, October 29 -

November 3, 1989; Week 4, February 25 - March 1990. Sponsored by Arizona State University, Western Network for Education in Health Administration and the American Academy of Medical Directors. Tempe Mission Palms Hotel, Tempe, Arizona. Fees: Prior to October 1988, \$2,600; AAMD members are eligible for a \$200 discount. All participants are required to make a non-refundable deposit of \$300 with the application. Category I credit available on an hour-four-hour basis. For further information contact The Western Network for Education in Health Administration; 2131 University Avenue, Suite 428; Berkeley, CA 94704; (415) 642-0790.

NOV. 27 - DEC. 2

Seventy-fourth Scientific Assembly and Annual Meeting of the Radiological Society of North America. Sponsored by RSNA. McCormick Place, Chicago. For further information contact, RSNA, 1415 W. 22nd Street, Tower B; Oak Brook, IL 60521; (301) 571-2670.

KEEPING UP

Cholesterol: Current Concepts for Physicians

Self-Study Course for Physicians. Sponsored by the National Health, Lung and Blood Institute. A national cholesterol education program is available through the Arkansas Medical Society office in which a physician studies at home. Two hours Category I credit. Further information: David Wroten, Arkansas Medical Society, P. O. Box 5776, Little Rock, AR 72215; (501) 224-8967.

Respiratory Diseases

September 1, 12:30 p.m. Presented by Dr. Robert Walling. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Nutrition and Aging IV

September 7-8, 8:30 a.m. - 4:30 p.m. Presented by Ronni Chernoff, Ph.D. and David A. Lipschitz, M.D.,

Ph.D. Sponsored by UAMS College of Medicine. Excelsior Hotel, Little Rock. Eleven Category I credit hours. Fee: \$50.00 VA employees; \$175.00 all others.

Pediatrics in Family Practice

September 9, 7:30 a.m. - 4:15 p.m. Sponsored by Arkansas Children's Hospital and UAMS Continuing Education for Physicians. Arkansas Children's Hospital, Sturgis Auditorium. Seven Category I credit hours. Fee: \$50.00.

Internal Medicine Conference

September 13, 12:30 p.m. Presented by Dr. Larry Price. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Upper GI Malignancies

September 17, 8:30 a.m. - 12 noon. Speaker: John Macdonald, M.D., Lucille Parker Markey Cancer Center,

Louisville, KY. Sponsored by St. Vincent Infirmary Medical Center. St. Vincent Infirmary Center for Health Education. Three Category I credit hours.

Tumor Conference

September 20, 12:00 noon. Presented by Dr. Randal Bowlin. Sponsored by AHEC - Fort Smith. Fourth Floor Conference Room, Sparks Regional Medical Center. One Category I credit hour.

Solitary Pulmonary Nodules

September 21, 12:30 luncheon. Presented by L. E. Vereen, M.D. Sponsored by AHEC - Southwest. St. Michael Hospital. One Category I credit hour.

Neuro-Ophthalmology

September 23-24, 9:00 a.m. - 12 noon. Presented by J. Lawton Smith, M.D.; Bascom Palmer Eye Institute, Miami, FL. Sponsored by the Arkansas Academy of Ophthalmology. Red Apple Inn, Eden Isle, Heber Springs. Six Category I credit hours. Fee: \$50.00.

Angina Therapy

September 27, 12:30 p.m. Presented by Charles Marsh, Pharm.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Sexual Abuse Workshop

September 27, 12:30 p.m. Presented by various speakers. Sponsored by AHEC - Fort Smith. Westark Community College. One Category I credit hour.

Childhood Immunizations

September 28, 12:30 p.m. Presented by Dr. Charles Floyd. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Geriatric Conference

September 30, 1:00 p.m. Presented by various speakers. Sponsored by AHEC - Fort Smith. Sheraton Inn Fort Smith. One Category I credit hour.

Internal Medicine Conference

October 4, 12:30 p.m. Presented by Dr. L. C. Price. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Juvenile Rheumatoid Arthritis

October 18, 12:30 p.m. Presented by Dr. Robert Walling. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Premenstrual Syndrome

October 25, 12:30 p.m. Presented by Charles Marsh, Pharm. D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Behavioral Management of Pain

October 27, 12:30 p.m. Presented by Ron Huisman, Ph.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Recurring Education Programs

As organizations accredited for continuing medical education by the Arkansas Medical Society, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), each Friday, 12:15 p.m., Conference Room, Building 1, VAMC
Mortality/Morbidity Conference, fourth Wednesday, 2:45 p.m., Conference Room, Building 1, VAMC

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon, varying topics, alternating Fridays, 12:30 p.m., Classrooms, AMI National Park Medical Center

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Metabolic Neurology Conference, first Wednesday, 1:00 p.m., Physicians Lounge, 2nd Floor
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium

Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Second Floor Classroom
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday when applicable, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Sturgis Building, Rooms S120-121
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium0
Cancer Conference, third and fourth Thursday, 12:00 noon, Room S1174K, Lab
General Medicine Journal Club, each Tuesday, 12:00 noon, Petit Jean Room
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Arkla Room
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory (cancelled for August)
Pediatric Conference, first Tuesday, 12:30 p.m., Maumelle Room (cancelled for August)
Peripheral Vascular Disease Conference, fourth Tuesday, 6:00 p.m., Arkla Room (cancelled for August)
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, Southwestern Bell/Arkla Rooms

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and case presentations
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES - LITTLE ROCK

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Conference Series, times and dates vary, UAMS Education Building, Room G/110 A&B
Anesthesia Morbidity and Mortality Conference, every second and fourth Tuesday, 6:45 a.m., UAMS Education Building, Room G/110 A&B. Every first, second and third Thursday, 4:00 p.m., Room G/112 A&B
Child Psychiatry Clinical Case Conference, first Friday, 1:00 p.m., UAMS Child Study Center Conference Room.
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium
Medicine Research Conference, each Wednesday, 4:30 p.m. Shorey Building, Room 3506
Neurology Clinical Case Conference, three or four Thursdays per month, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH
Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (7D33) and LRVAMC (Autopsy Room)
Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7D33
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Basic Science Conference, occasional Tuesdays, 11:00 a.m., UAMS Education Bldg., Room B/135
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds/Clinical Case Conference, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building, Room 159
Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Morbidity and Mortality Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A
Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Conference, last Wednesday, 5:00 p.m., UAMS
Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS
VA Diagnostic Imaging Conference, every Tuesday, Wednesday and Thursday, 8:00 a.m., LRVA Nuclear Medicine Conference Room, Room 1D173
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., NLRVA, Building 66, Room 38
VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., NLRVA Building 89, Conference Room, or Arkansas Rehab Institute
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Surgery Service General Chest Topics (Combined Surgery/Medicine Lung Conference), every other Monday, 12:15 p.m., LRVA, Room 2D109
VA Surgery Service Lung Cancer Conference, every Tuesday, 3:00 p.m., LRVA, Room 2E142
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Tumor Conference, each Tuesday, 1:00 p.m., VAMC, Room 2D109

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas
Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital

Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pediatric Conference, third Friday, 12:15 p.m., Union Medical Center.
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital
Medicine Teaching Conference, first, third and fifth Thursday, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville
Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC - NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center
St. Mary's Saturday Morning Problem Conference, each Saturday, 8:30 a.m., St. Mary's Rogers Hospital, Rogers, AR

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, every four months, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, MO
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pochahontas
Neuroradiology Conference, second Friday, 12:00 noon, St. Bernard's Dietary Conference Room
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Wynne Tumor Conference, third Tuesday, 6:00 p.m., Grecian Steak House, Wynne, every four months

PINE BLUFF-AHEC

Behavioral Science Conference, first and third Thursday, 12:30 p.m., Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, first and fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Geriatrics Conference, third Friday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Orthopedic Case Conference, second and fourth Thursday, 12:30 p.m., Jefferson Regional Medical Center
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, fourth Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting
Surgery Conference, first Friday, 12:30 p.m., Jefferson Regional Medical Center
Tumor Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Cardiology Conference, alternating Fridays, 11:30 a.m., St. Michael Hospital
Cine Radiology, second Friday, 12:00 noon, Wadley Regional Medical Center
Echo-Cardiology, fourth Friday, 12:00 noon, Wadley Regional Medical Center
Neuro-Radiology Conference, second and fourth Wednesday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Surgeons and Pathologists Conference, second Thursday, 7:00 a.m. breakfast, Wadley Regional Medical Center
AHEC Tumor Conference, first Wednesday, 7:00 a.m. breakfast, St. Michael Hospital

Correction

The list of attendees for the final House of Delegates in the June 1988 *Journal* was incomplete. Dr. Sanford Hutson's name was inadvertently left off of the list. Dr. Hutson is from Paris and is the delegate for Logan County. Our apologies for any inconvenience this error may have caused.

FROM THE ARKANSAS STATE MEDICAL BOARD

AMENDED REGULATION NO. 7

Regulations governing the prescribing of Amphetamines and Amphetamine type drugs

All prescriptions for:

- (1) Schedule II Amphetamine, its salts, optical isomers, and salts of its optical isomers;
- (2) Schedule II Methamphetamine, its salts, isomers, and salts of its isomers;
- (3) Phenmetrazine and its salts;

must comply with both State and Federal Laws and, in addition, must contain a notation, written on the prescription by the physician writing the prescription, of the physical or mental condition of the patient which indicated the prescription.

Prescriptions for these Controlled Drugs may be written by a physician only for the treatment of Narcolepsy or Hyperkinesis. No second or subsequent prescription for these Controlled Drugs may be written for the patient until a second opinion is obtained from a physician confirming (1) the diagnosis of Narcolepsy or Hyperkinesis and (2) that the Controlled Drug is the drug of choice.

Upon application to the Board and upon demonstration of need, any physician who specializes in the treatment of Hyperkinesis or Attentional Deficit Disorder With or Without Hyperactivity may obtain exemption from the requirements of this regulation. The Board shall maintain a register of all licensed physicians thus exempted.

Violation of this Regulation shall constitute grossly negligent or ignorant malpractice and shall subject the physician to all penalties provided in Ark. Stat. Ann. Section 72-613.

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Physician Labs Under Cloud

Most of the nearly 100,000 clinical laboratories operated in physician offices likely would be forced to close after 1990 unless a provision contained in OBRA '87 is either repealed or substantially modified, the American Medical Association told a House subcommittee in early July.

American Medical Association President-elect Alan R. Nelson, M.D., testified before the Subcommittee on Health and Environment of the House Energy and Commerce Committee, which held hearings on lab regulation. It is essential, Dr. Nelson stressed, that MDs not be precluded from providing their patients with office-based clinical lab services, which afford diagnostic timeliness, improved access, and patient convenience.

Under a provision of OBRA '87, all clinical laboratories providing more than 5,000 tests a year would be required to meet existing independent clinical laboratory requirements, including personnel standards, starting in 1990. Physician offices currently are exempt from this requirement.

At the 1988 Annual Meeting, the House of Delegates adopted a statement outlining mechanisms to assure the quality of in-office testing. It supports development of national quality assurance standards for physician office laboratories, based on factors such as proficiency testing, quality control, and continuing education.

700 Hospitals Could Close by 1993

Forty-eight percent of the more than 1,400 hospital executives responding to a survey released today by Touche Ross say their institutions are vulnerable to failure within the next five years.

Questionnaires were sent to the administrator or chief executive of all 5,678 acute-care hospitals throughout the country. Twenty-five percent (1,419) returned completed questionnaires, as did 470 presidents of medical staffs.

According to Raymond J. Cisneros, National Director of Healthcare Services for the Big Eight accounting and management consulting firm, if these predictions are accurate, 680 hospitals from the survey sample alone may close their doors within five years. Said Cisneros, "The fact that so many hospitals anticipate failure is even more dramatic when one realizes that 150 hospitals have already closed in the past two years."

Small, rural, and government-owned hospitals are the institutions facing the biggest possibility of failure. Sixty-

three percent of the hospitals with fewer than 100 beds said they are vulnerable to failure, as did 54% of the government-owned and 57% of the rural hospitals. According to Cisneros, "There is also a startling increase in the percentage of suburban hospitals that say they are vulnerable to failure. In a survey Touche Ross conducted in 1986, 29% of suburban hospitals said they were vulnerable, but in 1988 that percentage has increased to 40%."

The regions in which hospitals are most susceptible to failure, according to hospital executives, are the West South Central region (Arkansas, Louisiana, Oklahoma, and Texas), where 57% of the hospitals said they may close, and the farm states of Iowa, Kansas, Minnesota, Missouri, Nebraska; and North and South Dakota, where 53% said they may fail. Hospitals in the New England states show the most dramatic increase in susceptibility to failure - from 21% in 1986 to 46% in 1988. But there are improvements in both the Mid-Atlantic and the Pacific regions: fewer hospitals from these regions said they are vulnerable to failure than in 1986.

One of the primary causes cited for the increased vulnerability to failure was the decrease in revenues under the Medicare Prospective Payment System, a program started in 1983 which standardized the amount Medicare reimburses hospitals for inpatient care. Sixty-eight percent of the hospital executives responding to the survey indicated that their income has dropped since PPS became effective. While the majority of small hospitals continued to feel the pinch of PPS, Cisneros noted that a majority of large institutions now also report decreases in income.

Other major results from the survey indicated that occupancy rates were at an all-time low, with 46% of the hospital executives saying their average occupancy, over the past 12 months, has been less than 50%.

Respondents also ranked their quality of care. In 1986, 55% of the hospitals ranked the health care available in their geographic regions as excellent, but in 1988 that number dropped to 44%.

The quality of care provided by their medical staffs is less than excellent, said 59% of the hospital executives and 49% of the presidents of medical staffs, principally because of the physicians' lack of commitment.

Three-fourths of the respondents reported a nursing shortage and the quality of care provided by the nursing staff is less than excellent, according to 53% of the executives and 71% of the presidents of medical staffs, primarily because of the shortage.

Three-fourths of the hospital executives, as well as two-thirds of the presidents of medical staffs, thought health care provided to patients should be limited when the cost of providing that care becomes excessive.

Seventy-six percent of the hospital executives and 91 percent of the presidents of medical staffs said that in five years patients will have less freedom of choice in the selection of services and providers than they have now.

More than three-fourths of the hospital executives and 85 percent of the presidents of medical staffs believed that the increased cost of malpractice premiums has already limited patients' access to care.

CME Certificates Modified

In the past, American Medical Association Physician Recognition Award (PRA) certificates have been valid for three years and have been awarded as a result of

three years of continuing medical education (CME) activity. Beginning in September, the AMA will award certification based on one, two, or three years of continuing medical education that will be valid for one, two, or three years.

A one-year certificate requires 50 hours of CME, 20 of which must be in the AMA Physician Recognition Category I. A two-year certificate requires 100 hours; 40 in Category I. As in the past, a three-year certificate requires 150 hours; 60 in Category I.

"Our reason for doing this is to make it easier for physicians to use the PRA certificate for reciprocity purposes, for instance in reporting CME to state licensing boards that have reporting requirements. Another reason is to encourage participation in the program," said Arthur Osteen, Ph.D., Office of Physician Credentials and Qualifications.

NEWSMAKERS

Boone County Physicians Host Hammerschmidt Fundraiser/Reception

Party politics aside...the physicians of Boone County gathered to honor U. S. Representative John Paul Hammerschmidt for his outstanding voting record regarding medical issues in Congress. Coordinated by the Arkansas Medical Society with district councilor, **Dr. Robert H. Langston**, the reception was held at the North Arkansas Community College in Harrison. In addition to the participation by Boone County physicians, invitations were also extended to other community leaders.

Almost 100 persons attended the function and approximately \$10,000 was raised for Hammerschmidt's campaign committee. Local physicians, aided by the medical auxiliary, divided up such duties as publicity, telephone contacts, entertainment, and catering to insure the success of the program.

As an active member of the legislative committees of the Arkansas Medical Society, Dr. Langston said, "I would strongly encourage all physicians in the state to participate in similar activities. Only with the 'grassroots' physician participation will our influence be significant across the state."

If interested in sponsoring a fund raiser/reception in your area, contact Lynn Zeno, the AMS Director of Government Affairs.

Dr. John Hall, a Clinton general practitioner, recently returned from an eight-country medical studies tour. Dr. Hall studied under European experts from Austria,



Czechoslovakia, Hungary, Rumania, Bulgaria, Russia, Turkey and Greece. His trip was arranged under the directorship of the Medical University of South Carolina, Charleston, and included the study of AIDS, Pathogenic Mechanisms of Microbes, Acobic/and Aerobic Infections, Urinary Tract Infections and Sexually Transmitted Disease.

The 1988 Gold Medal Award of the American College of Radiology was awarded to **Joseph D. Calhoun, M.D.**, a Little Rock radiologist. The award is presented annually to a radiologist who is recognized for his "distinguished and extraordinary service" to the profession of radiology and to the American College of Radiology.

W. Robert Thurlby, M.D., an internist with the Millard-Henry Clinic in Russellville, attended an internal medicine review recently at the Mayo Clinic in Rochester, Minnesota. The course topics included antibiotics, thoracic infections, management of cholesterol and triglyceride disorders.

The Texas Medical Association honored **Dr. William Bedwell Harrell, Jr.**, of Texarkana, with Life Membership. Dr. Harrell is a member of the Bowie County Medical Society and a Life member of the Arkansas Medical Society.

Dr. E. Mitchell Singleton, a Fayetteville ophthalmologist, spoke recently at the meeting of the Alliance for the Mentally Ill. His topic was "A Country Doctor's Experiences with the Mental Health System: Perspective from a Non-specialist."

The Advanced Mammography Seminar in Kansas City, Missouri, was attended by **Marc Trager, M.D.**, a

radiologist from Mountain Home. The course was presented by Dr. Marc Homer, a professor at Tufts University Schools of Medicine in Boston.

Kurt S. Vinsant, M.D., a surgery resident at the University of Arkansas for Medical Sciences, was honored with the Kilcrease Award for his research project, "Pathology of Laser Arterial Therapy." Vinsant is completing a general surgery residency at Baptist Medical Center.

Governor Bill Clinton re-appointed **Marvin Leibovich, M.D.**, to the Emergency Medical Services Advisory Council. Dr. Leibovich is the Director of Emergency Services at Baptist Medical System and resides in Benton.

Don Gene Howard, M.D., has been named assistant adjutant general of the Arkansas Army National Guard and was recently promoted to the rank of brigadier general. Dr. Howard is a family practitioner in Fordyce and has been an active national guardsman since 1961.

NEW MEMBERS

ARKANSAS COUNTY MEDICAL SOCIETY

Barr, Marilyn, I., Family Practice, Waldron. Born November 27, 1939; Fort Smith. Pre-medical education, Valparaiso University, Valparaiso, IN; B.S., 1961. Medical education, University of Arkansas for Medical Sciences, 1980. Residency, UAMS, AHEC - Fort Smith. Practice experience, 3+ years, Waldron. Board certified, AAFP. Member, AAFP.

BENTON COUNTY MEDICAL SOCIETY

Stolzy, Sandra L., Anesthesiology, Rogers. Born November 30, 1952; Washington, D.C. Pre-medical education, Widener University, B.S., 1981. Medical education, Medical College of Pennsylvania, 1981. Internship, The New York Hospital. Residency, Hospital of the University of Pennsylvania, Philadelphia. Practice experience, 3 years, VAMC of Louisville and University of Louisville, KY. Teaching appointments, Assistant Professor, University of Louisville. Board certified, ABA. Member, ASA, IARS.

Webb, William F., Family Practice, Decatur. Born October 11, 1943; Gravette. Pre-medical education, University of Arkansas, B.A., 1964. Medical education, University of Arkansas for Medical Sciences, 1969. Internship, St. John's Hospital, Tulsa. Practice experience, 17 years, Decatur.

CARROLL COUNTY MEDICAL SOCIETY

Kresse, Gregory, F., Family Practitioner, Eureka Springs. Born January 14, 1955; Little Rock. Pre-medical education, Loyola University, New Orleans; B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1981. Internship/Residency, UAMS, Washington Regional Medical Center, Fayetteville. Practice experience, three years; Eureka Springs. Board certified.

CONWAY COUNTY MEDICAL SOCIETY

Carter, Stephen E., Family Practitioner, Morrilton. Born April 4, 1959; Jonesboro. Pre-medical education, Hendrix College, Conway; B.A., 1981. Medical education, University of Arkansas for Medical Sciences, 1985. Internship/Residency, UAMS, AHEC - Northwest. Member AAFP.

HOT SPRING COUNTY MEDICAL SOCIETY

Dunn, Robert N., General Surgery, Malvern. Born July 4, 1951; Oak Park, IL. Pre-medical education, Knox College, Galesburo, IL, 1972. Medical education, Rush Medical College, Chicago, 1975. Internship, Milwaukee County General Hospital. Residency, Michael Reese Hospital, Chicago. Practice experience, two years,

Westchester, IL; three years, Malvern. Teaching appointments, Assistant Professor, University of Illinois. Board certified, Surgery.

PULASKI COUNTY MEDICAL SOCIETY

Brunson, Ashley, D., Obstetrics/Gynecology, Little Rock. Born July 4, 1958; Little Rock. Pre-medical education, Hendrix College, 1980. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/residency, UAMS. Board eligible.

Knight, Daniel A., Family Medicine, North Little Rock. Born October 31, 1957; Little Rock. Pre-medical education, University of Arkansas at Little Rock, 1981. Medical education, University of Arkansas for Medical Sciences, 1985. Internship/residency, UAMS. Board eligible.

Murphy, Robert A., Gastroenterology, North Little Rock. Born August 14, 1957; Little Rock. Pre-medical education, Rhodes College, Memphis; B.S., 1979. Medical education, University of Arkansas for Medical Sciences, 1983. Internship/residency, UAMS. Practice experience, three years, Riverview Hospital, Little Rock. Board certified, Internal Medicine.

Nokes, Steven R., Radiology, Little Rock. Born May 12, 1955; Jacksonville, FL. Pre-medical education, Christian Brothers College, Memphis; B.S., 1978. Medical education, University of Tennessee, 1983. In-

ternship, University of South Florida. Residency/fellowship, Duke University. Board certified, Radiology.

SEBASTIAN COUNTY MEDICAL SOCIETY

Cheyne, Thomas E., Sports Medicine, Fort Smith. Born May 12, 1954, Springdale. Pre-medical education, University of Arkansas, Fayetteville; B.A., 1976. Medical education, University of Arkansas for Medical Sciences, 1980. Internship/residency, UAMS AHEC - Northwest. Practice experience, 4+ years, St. Edward Mercy Medical Center; 1+ years, Crawford Memorial Hospital.

Taft, Eric D., Pathology, Fort Smith. Born June 25, 1956; Ohio. Pre-medical education, University of Tulsa, B.S., 1978. Medical education, University of Oklahoma, 1981. Residency, University of Texas, Parkland Hospital. Practice experience, 2 years, Little Rock; 1 year, Fort Smith. Board certified, Pathology. Member, ASCP, College of American Pathologists.

RESIDENT MEMBERS

Cardwell, Daniel R. Born October 1, 1959, Carthage, MO. Pre-medical education, Southern Arkansas University, Magnolia; B.S., 1981. Medical education, University of Arkansas for Medical Sciences, 1986. Internship, Sinai Hospital, Detroit. Residency field of study, General Surgery.

IN MEMORIAM

DR. JOHN ALLEN TEETER

John Allen Teeter, M.D., a Little Rock pediatrician, died Saturday, July 16, 1988. He was 56.

Dr. Teeter was a member of the American Academy of Pediatrics and an Emeritus member of the Arkansas Medical Society. He also was a senior assistant surgeon at the Slip Rock Indian Reservation in New Mexico, a U. S. Public Service position.

Dr. Teeter was recognized in 1985 for exemplary volun-

teer work for Camp Aldersgate's MedCamps, of which he was an original board member. He was also affiliated with the Allergy Fellowship Fund which makes grants to aid students in the study of allergies.

Dr. Teeter is survived by three daughters, Mary Elizabeth, Sarah and Maria Teeter of Little Rock; his mother, Gertrude Mann Teeter of Malvern, and a sister, Rebecca T. Thompson of Little Rock.

*Memorials honoring Arkansas Medical Society members and their families can be made to the Medical Education Foundation for Arkansas (MEFFA),
Post Office Box 5776, Little Rock, Arkansas 72215.*

AMS Special Committee on AIDS

William N. Jones, M.D., Chairman

Update: September 1988 AIDS and Adolescents: The Need for Prevention

Anita Gottlieb, R.N.P., M. Susan Jay, M.D.* and Vaughn I. Rickert, Psy.D

Acquired Immune Deficiency Syndrome (AIDS) poses an unparalleled challenge for today's health care professionals. According to U.S. Surgeon General C. Everett Koop, AIDS is presenting legal, ethical, social and economic dilemmas that are as difficult to address as the medical issues.¹ Although the majority of attention until recently has focused on the adult population, health care providers are becoming increasingly aware that adolescents are a population at risk for contracting AIDS.

Current reports indicate that 53,000 people in the United States have been diagnosed as having AIDS and a probable 1.5 million are infected with the Human Immunodeficiency Virus (HIV).² Although initially this disease was confined to the large American coastal cities, it now has spread to all fifty states including Arkansas. In the United States, 93% of the reported cases are in the male population, but increasing numbers of young minority women are becoming carriers of the virus. In Africa, where the disease is more prevalent, adolescent females, age 15-19 years, have the highest rates of seropositivity, and epidemiologists believe their route of infection to be heterosexual contact with older partners.² Adolescent females in the United States also tend to have male partners several years older, which may place them at increased risk of exposure to the HIV infection.²

Presently, adolescents do not constitute a group with high morbidity or mortality from AIDS, however the prevalence of the HIV infection in this population is unknown. Although the number of cases of AIDS in adolescents has been reported to be less than two percent nationally, 21% of all individuals diagnosed are in the 20-29 age range.³ Since the latency period from exposure to diagnosis of this disease may be as long as seven years, it is possible that a number of individuals with AIDS may

have contracted it during adolescence and remained asymptomatic until young adulthood.

Sexual contact has been the route of transmission in 78% of all AIDS cases.⁴ Although heterosexual partners of persons with AIDS represent only 4% of all reported cases, this route accounts for 27% of the female cases.⁵ Minority adolescents may be at increased risk of contracting AIDS since their rates of infection (25% black and 14% hispanic) are disproportionately higher than their respective representation in the overall United States population (12% black and 6% hispanic). This finding is supported by a Department of Defense study which screened recruits for HIV in 1985. The HIV prevalence in the 19-21 age group was 1.5/1,000 with the rate of infection for black recruits four times higher than whites.⁶

Characteristics of the Adolescent

Adolescence is a developmental period characterized by impulsive behavior, a desire for immediate gratification and a tendency to question authority. Adolescents generally feel they are not vulnerable to catastrophic events and take part in various risk-taking behaviors. The willingness of this age group to experiment with drugs, the strong influence of peer pressure and early sexual activity places them at risk for HIV infection. Early in the AIDS epidemic, the risk to teenagers was not recognized and it wasn't until May, 1987 that the first major article appeared in a medical journal addressing AIDS and the adolescent population⁷, and in June of 1987, the House Select Committee on Children, Youth, and Families held the first hearing on AIDS⁸ and Teenagers. Since that time, health care professionals have begun to recognize and address this problem as it relates to adolescents.

The degree to which adolescents are in danger of becoming infected with the AIDS virus depends upon the

* Assistant Professor, University of Arkansas for Medical Sciences, Adolescent Medicine, 4301 West Markham, Little Rock, Arkansas 72205.

AIDS IN ARKANSAS 1988

January 1 - August 12, 1988

Total number of cases
reported

59

Number of deaths

19

CASES BY SEX

Male

54

Female

5

CASES BY RACE

White

45

Black

14

CASES BY RISK GROUP

Homosexual/Bisexual*

36

IV Drug User

2

Hemophiliac

1

Transfusion

4

Heterosexual

3

NIR#

4

* Of the 39 homosexual/bisexuals, 9 are/were IV drug users

No identified risk group (NIR)

CASES BY AGE GROUP

Less than 20

0

20 - 29

20

30 - 39

28

40 - 49

5

50 - 59

2

60 or more

4

OPPORTUNISTIC DISEASE

Pneumocystic Carinii

28

Kaposi's Sarcoma

3

Pneumocystis Carinii

and Kaposi's Sarcoma

2

Other

26

AIDS IN ARKANSAS

1985 - 1988

Total number of cases
reported

149

Number of deaths

78

CASES BY SEX

Male

139

Female

10

CASES BY RACE

White

115

Black

31

CASES BY RISK GROUP

Homosexual/Bisexual*

91

IV Drug User

15

Hemophiliac

1

Transfusion

6

Heterosexual

6

NIR#

5

* Of the 91 homosexual/bisexuals, 25 are/were IV drug users

No identified risk group (NIR)

CASES BY AGE GROUP

Less than 20

0

20 - 29

51

30 - 39

66

40 - 49

21

50 - 59

5

60 or more

6

OPPORTUNISTIC DISEASE

Pneumocystic Carinii

75

Kaposi's Sarcoma

7

Pneumocystis Carinii

and Kaposi's Sarcoma

5

Other

62

extent to which they engage in risk-taking behaviors such as unprotected intercourse. The incidence of pregnancy and prevalence of sexually transmitted disease (STD) among adolescents have been used as indicators of sexual activity. Reports show that by 16 years of age, 50% of American teenagers have initiated intercourse and this increased to 70% by age 19. Approximately two-thirds of these sexually active females use ineffective methods or do not practice contraception.⁹ Since some groups of high risk adolescents harbor venereal diseases such as GC, syphilis and chlamydia that were prevalent prior to the HIV epidemic, teenagers could also be a new reservoir for undetected HIV infection. Hein et al studied the rates of gonorrhea (GC) among juvenile delinquents in New York and found that seven percent of the females and 1.9% of the males were infected but were asymptomatic for GC.² Thus, the lifestyle of today's youth places them directly in the path of this disease.

Statewide Significance

As of 1985, 21% of reported Arkansas pregnancies and 19% of all live births were to females under 20 years of age. Furthermore, Arkansas is above the national average in births to females 10-19. Although attention is usually focused on unplanned pregnancy, STDs are yet another adverse outcome. In 1987, the Arkansas Department of Health reported to Centers for Disease Control (CDC) 3,041 cases of GC in the 10-19 year age range, and of these 1,302 were minority females. The early onset of sexual activity and the increasing number of STDs in this age group warrants attention. In Arkansas, as of May, 1988 of the 132 reported cases of AIDS, 47 were in the 20-29 age group. This data suggests that some of these individuals may have become infected during the adolescence and served as a reservoir during the intervening years. This percentage, in Arkansas, exceeds the national mean incidence of AIDS in this age group. Although we have only a small number of reported AIDS cases in our state at present, this data suggests our youth may be at risk and need behaviorally-focused education regarding AIDS and its transmission.

Other Risk Factors

Despite the reports of sexual activity and STDs among the adolescent population, it should not be assumed that all teenagers are equally at risk for HIV infection. According to Hein, particular subgroups such as teens who have multiple sexual partners, minority youth who use intravenous drugs and the homeless who engage in street prostitution may be the greatest risk. Although most adolescents are aware of various dangers in their world, i.e. car accidents or chronic illnesses, they frequently feel that they are immune until they have experienced a problem first hand. Adolescents may feel invulnerable to the AIDS epidemic and not engage in preven-

tive behavior until a friend or relative is affected.² They also tend to focus on concrete issues and immediate risk rather than long term sequelae. It is important to recognize and understand the interactive roles of biology, psychology and the environment of the adolescent in order to develop the most appropriate and effective intervention for this population.¹⁰ A recent CDC study analyzed AIDS victims ages 11-24 and found 37 cases were between the 11-17 years of age versus 1,122 cases between 18-24 years. Eighty percent of the younger group were males who received transfusion as compared with 4% of the older group. Homosexual or bisexual individuals comprised 18% of the younger group versus 79% of the older segment.²

Another source of transmission of the HIV virus is through sexual abuse. Although it is difficult to estimate the number of teenagers who are sexually abused, one study found that approximately 3% of today's adolescent population are victims of sexual abuse.¹⁰ Approximately one million American teenagers run away from home each year and many of these runaways become involved in illegal activities such as drug abuse, prostitution, and drug trafficking.¹¹ Although any sexually active teenager may be at risk for AIDS, these activities place them at even greater risk and those using IV drugs, gay or bisexual adolescents and prostitutes need to be alerted to the AIDS epidemic and targeted for preventive intervention.

HIV Testing

Testing adolescents for HIV infection is being proposed with increasing frequency in a variety of settings, including juvenile detention, the foster care system and some teenage pregnancy programs.¹² The appropriateness of HIV testing of adolescents either on an individual basis or as a part of a widespread screening program is a controversial issue. In the absence of research studies or published clinical reports, the full implications of testing adolescents has not been established. Potential disadvantages include the possibility that notification of a positive test result may elicit emotional and adjustment problems or even suicide attempts among adolescents.¹² If testing is decided upon, it should be voluntary and with informed consent with the adolescent receiving information and counseling regarding the test and its implications. Testing can best be offered in conjunction with an overall health education program that includes information on detection and prevention of the HIV infection.

Education

Misinformation regarding the AIDS epidemic abounds in both the adult and adolescent population. In 1985, a study in San Francisco demonstrated that only 60% of the teenagers surveyed knew that the use of a condom might prevent the transmission of AIDS, and only 25% knew there is no vaccine.¹³ Struin et al surveyed adolescents in Massachusetts and found many in-

correctly believed that HIV could be transmitted through kissing, sharing eating utensils, sitting on toilet seats or donating blood. Only one third were worried about contracting AIDS themselves and only 15% of those who were sexually active were practicing appropriate prevention.¹⁴ In September, 1987, the National Health Interview Survey found only 42% of parents surveyed reported their children had received instruction about AIDS at school.¹⁵

The Surgeon General has addressed the need for public education on the AIDS epidemic through the recent national distribution of the brochure "Understanding AIDS". In this publication, he challenged Americans to respond to this crisis by saying "Stopping AIDS is up to you, your family and your loved ones."¹⁶ To meet this challenge for the adolescent population, age appropriate education programs must be developed. Haffner reported a survey conducted in December of 1986 at the U.S. Conference of Mayors that reviewed school-based AIDS education. It revealed that approximately one-third of the county school districts were beginning to address the issue of AIDS.¹⁷ Helgersen et al reported that the major sources of AIDS information for adolescents were television, radio, and magazines. However, the majority of the students surveyed preferred the education be provided by a health care professional, teacher or group leader.¹⁸ Studies have demonstrated the positive effect of utilizing peer counselors to improve contraceptive compliance.¹⁹ We are currently conducting a study to determine the effect utilizing peer counseling for distribution of AIDS education.

Adolescents are forming lifelong health habits and need information to guide their development to adulthood. AIDS education should be ideally be integrated into existing comprehensive health or educational programs. Abstinence or delaying sexual activity as advocated by the U.S. Surgeon General must be emphasized.²⁰ It is important to obtain community participation and support to ensure that appropriate health education policies and programs are developed and implemented for adolescents. The content of AIDS education should address the broad range of behaviors exhibited by teenagers and encourage young people who have not engaged in sexual intercourse or illicit drugs to continue to abstain.

The Center for Population Options²¹ suggests that the AIDS prevention programs for adolescents should:

- 1) reduce misinformation regarding the disease and its prevention;
- 2) encourage abstinence and delay of the initiation of sexual intercourse;
- 3) encourage consistent use of condoms;
- 4) discourage experimentation with drugs or IV drug usage.

Conclusion

The AIDS epidemic is no longer limited to a special geographic region but is also our problem. As health

care providers, we must begin to consider the challenge and determine how we can best meet the needs of our patients. Physicians have historically been an excellent community resource for coordinating and dispensing education on health issues. At present, our single best option remains education. Health care providers need to consider the impact of AIDS and develop measures to prevent the spread. Since no cure is currently available, a cohesive team approach to education including churches, teachers, and health care providers is necessary.

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Who Has the Last Say?

Ben N. Saltzman, M.D.



It seems that I was destined to become an advocate for the older adult and his or her health problems almost from the onset of my medical career. Upon graduation from the University of Oregon School of Medicine in 1940, I completed a one-year internship and a one-year general residency program at Gorgas Hospital in the Panama Canal Zone. World War II had begun for the United States and my commission in the Army of the United States was activated. Because of the shortage of physicians in the Canal Zone, I was detached to the Panama Canal Health Department and cared for civilians throughout the war for a period of four years.

The Panama Canal Zone was an interesting segment of the United States and its possessions. The civilian population was stable. Entire generations lived and died in the Zone, and the extended family was the rule rather than the exception. As the head of a dispensary in a small community, I truly became a family doctor for the town of Gamboa, a Dredging Division community. Except for the occasional fear of invasion, life was pretty idyllic. There was a form of socialized medicine, inasmuch as the costs of health care were entirely absorbed by the Panama Canal Authority and physicians were available around the clock. Most of my patients were elderly and their ailments were no different from those within the boundaries of the United States. Those who retired lived with their offspring who also worked for the Canal Zone. The problems of loneliness in old age did not exist for them. It was a close community even for those who retired to the United States. Most were members of the Panama Canal Association and thus kept in touch with each other over the years.

The end of the war brought me to the small community of Mountain Home, Arkansas, located in the foothills of the Ozark Mountains. It was becoming noted as a pleasant city for tourists and retirees because of its rural nature and its reputation for good fishing and hunting. It had even earned the appellation of "Little Chicago". Many retirees had bought property in the area and were building retirement homes.

Very early I found that my practice consisted of the two extremes of life. I delivered a lot of babies and took care of a lot of grandparents. Actually, delivering babies used up a great deal more energy than looking after the old folks. The babies were less considerate of my sleep needs. However, the retirees did offer many challenges. Most of their physical needs were simple. They had difficulty cutting toe-nails. They had accumulated too many medications over the years and hated to part with any of them. My real problem was the fact that many of these people had become my friends and I knew that normal attrition would take them away from me. Despite an excellent environment, many were lonely people. They had left family and friends behind and were having difficulty reestablishing themselves in a new community.

As time went on, my role became chiefly that of friendly counselor. It was satisfying to realize that I could fill that role. As the community grew, other specialties and specialists could care for the more specific ailments, but as a family doctor I learned their needs and could handle most of them.

At first, the experience of facing death and dying was one of my most difficult tasks. I would hope that somehow one of my colleagues would handle this for me. Later, as I matured, I was glad that I could be in a position of some help. The unconscious "stroke" victim and the family often caused stress all around. However, from the first, the family and I would come to an agreement. For a week we would do everything to provide life support in every form possible. At the end of that time, we would re-evaluate the situation and then make further decisions. This usually satisfied even the most critical. The difficult cases were those in which the patient was fully conscious, but did not want his or her life prolonged and resented any effort in that direction. Here too, we could work out an agreement. We would do nothing heroic, but we would maintain life to the best of our abilities in addition to providing personal attention to the extent possible and continue to evaluate the progress on a cooperative basis. This was tough, but it also worked.

Although we read that most people want their lives prolonged as long as possible, I have not often found that to be the case, especially among my older patients.

For example, the doctor who brought me to Mountain Home to take over his practice appointed me his personal physician. He retired from practice and devoted the rest of his life to work with the Boy Scouts, earning a Silver Beaver award; to young people in general providing college scholarships; and to the community as a good citizen working with the Chamber of Commerce and the Rotary Club. His wife of many years had died and he had no immediate family.

He lived on to the age of ninety-two and jokingly gave me credit for keeping him alive all those years. One day, his housekeeper called me to come to see him. He had been ill with fever for a week. I diagnosed pneumonia and took him to the hospital immediately. His response to my question as to why he had not let me know earlier was: "Ben, I really do not have much to live for now. My housekeeper insisted on calling you." He died the next night. He was a good friend, mentor and supporter. I shall always miss him. But he died with a smile on his face.

"Who has the last say?"

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ELECTROCARDIOGRAM OF THE MONTH

George T. Gray, O.D.
John W. Watson, M.D.
Division of Cardiology
UAMS - LRVA Medical Center
Little Rock, Arkansas

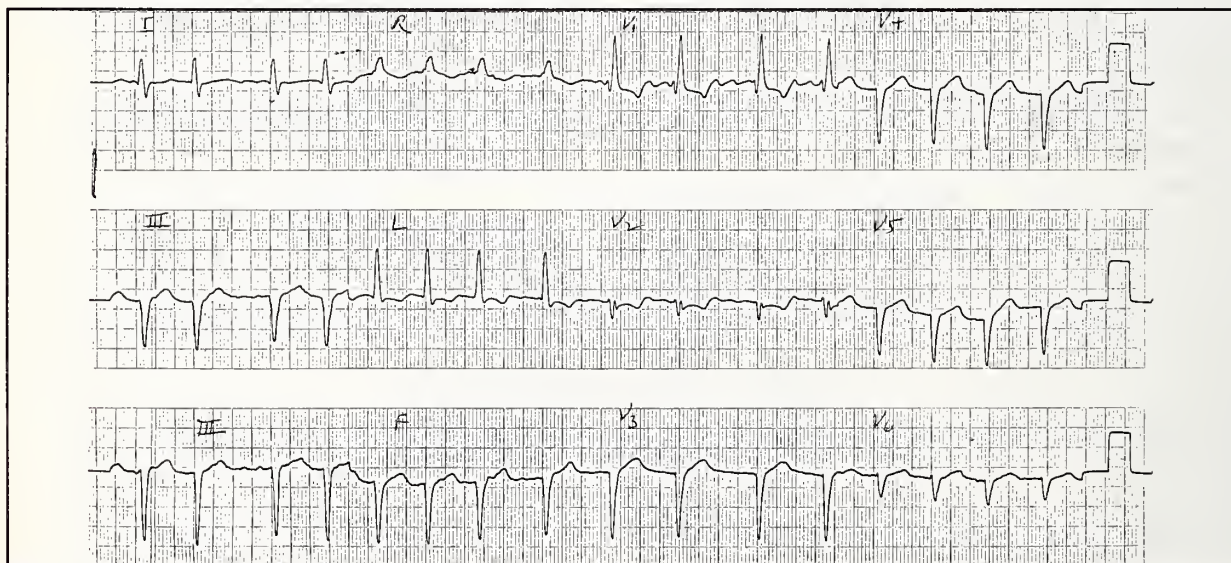
CLINICAL HISTORY:

J. C. is a 65-year-old man who presented to the hospital because of shortness of breath and nocturnal dyspnea. Myocardial infarction had taken place six weeks previously. On physical examination, the blood pressure was 210/110 mm Hg. Crackles were present in the lungs. The cardiac rhythm was irregular. S_1 was variable and an S_3 gallop was present at the apex. What do you think of the electrocardiogram?

DISCUSSION:

The mechanism is atrial fibrillation with ventricular response controlled between 75 and 90 beats per minute. Right bundle branch block is noted and left axis deviation is present. Left anterior fascicular block may be present. The Q waves from V_3 through V_5 are compatible with septal infarction, most probably remote. The patient's history and physical examination are compatible with congestive heart failure. The etiology is uncertain at this stage.

The editor wishes to thank Dr. Gray of Conway for his assistance with this month's feature.



Patient Autonomy: One Man's Story

In 1973, Dax Cowart was severely burned in an explosion. During his fourteen month hospital stay, he insisted he wanted to die and vigorously refused treatment. His requests were largely ignored. Although he survived and went on to become an attorney in Texas, Dax maintains that a competent, adult patient's wishes should supercede a physician's or hospital's desire to extend life.

Dax was invited to speak to a UAMS freshman ethics class in the spring of 1988. The session was sponsored by the Arkansas Medical Society Student Section and financed through a grant by the Arkansas Medical Society and Dr. Chris Hackler of the University's Medical Ethics Department. Portions of that informal question and answer session are presented below.

Dax: I'm pleased to be here. We have a fairly short time so I will make a few short opening remarks and then I would like to take your questions.

One question that is always asked is how I feel today, as opposed to the views I stated in "Please Let Me Die" and "Dax's Case." My views are the same as they have always been regarding patient autonomy. Before I was injured and while in the hospital, I felt that the patient with control of his or her own mind would determine what treatment her or she would not have. I felt that way during my hospital stay and I felt that was ever since. So my views have not changed in that respect.

Some of my views were somewhat wrong at the time I made the video "Please Let Me Die" while I was in the hospital. I did not expect to be able to enjoy life as

much as I am now. I felt that living a life as a blind cripple would be something that would prevent me from ever achieving any measure of happiness. I was wrong in that respect. I was wrong when I felt that my hands would always continue to be numb. I can use the thumb on my left hand and they are not numb. But basically, everything I was saying then is still true today.

"Can't You See I'm a Dead Man?"

In 1973, Dax Cowart was a 25-year-old, single man with a bright future ahead of him. He had been an United States Air Force pilot in Viet Nam and was waiting to be accepted as a pilot with a commercial airline.

One July morning, Dax accompanied his father, a real estate broker, to look at some property in the country. They parked their car in the shade near a creek. After looking at the land, they returned to the car only to find that it would not start. Dax's father looked under the hood while Dax tried the ignition. Suddenly a flame shot up from the car's carburetor and an explosion followed, throwing Dax sideways in the car.

Realizing he was on fire, Dax ran from the car. After passing through several walls of fire, he fell to the ground and rolled, all the while calling for help.

He got up again and ran down the road, only stopping when he heard voices calling that they were coming.

When a farmer arrived, Dax told him to find his father, whom he had not seen since the explosion. When the man returned, Dax told him, "Get me a gun. Can't you see I'm a dead man. I'm going to die anyway." The farmer told him gently, "I just can't do that."

An ambulance arrived, taking Dax and his father to a local hospital. Initial examination showed that Dax had a deep burn over 65% of his body with third degree burns on his face, ears, and hands. His eyesight was

(continued next page)

(Editor's note: "Please Let Me Die" was taped while Dax was undergoing treatment at Parkland Medical Center in Dallas and shows actual treatment. "Dax's Case" is a video made after Dax left the hospital. It contains interviews with Dax, his mother, his physicians and other involved parties.)

(continued from previous page)

gone. The hospital was unable to handle the severity of their cases, so transfer was arranged to Parkland Medical Center in Dallas, 140 miles away. Dax's father died en route to Parkland.

Several days later, Dax learned that the explosion was not caused by anything he or his father had done to the car, but that a propane gas line had been leaking nearby and the gas had settled in and around the creek bed where they had parked the car. A spark was all it took to cause the explosion.

Dax spent six months at Parkland, undergoing daily dressing changes and whirlpool treatments. He repeatedly asked that treatment be discontinued, but his requests were ignored on the presumption that he was under the influence of the narcotics and pain.

The attorney for the family initiated a lawsuit which was settled quickly. Dax wanted to remain alive only because a live plaintiff was more valuable for an equitable settlement.

Dax's mother signed all the release forms for Dax. It was her sentiment that his condition was such that he couldn't make a rational decision for himself. She accepted all the physicians' recommendations as to treatment.

Dax was transferred to the Texas Institute for Research and Rehabilitation in Houston. He had been

there about three weeks when a comment was made that it would take years before the rehabilitation and plastic surgery would be complete. Dax again refused treatment and within a few days his legs were infected and he was near death. He was put back into an acute care unit and rehabilitation was discontinued until the burns were completely healed.

Two psychiatrists were brought in to examine Dax because of his protests about receiving treatment and his request to be left alone. Both physicians found him to be mentally competent. But he was not allowed to refuse any treatment.

The physicians finally got Dax to agree to plastic surgery. They told him they would not help him die, but if he wanted to kill himself once he got home, he would need to be able to hold a gun. Surgery was done on Dax's hands.

After months of refusal, Dax realized he was going to live, with or without treatment. His only wish by this time was to get out of the hospital as soon as possible.

Fourteen months after being burned, Dax was released from the hospital. Although he does feel life has turned out relatively better than he expected, he is firm in his conviction that patient autonomy should play a major part in the treatment of any patient who is a lucid, competent adult.

How can a physician be sure that a patient really wants to die, that it is not a momentary desire or that the patient won't change his mind later?

I doubt that there is any way a physician can be absolutely sure. What I think should be done, how that problem should be addressed is to give the patient as much information as possible in a way the patient can understand. The risks, the benefits, the whole doctrine of informed consent. Give the patient time to at least be able to reflect on the consequences or the gravity of what he or she is deciding to do. Once the patient has been able to demonstrate an ability to reason and has had the opportunity to reflect on what the physician has told him or her, I feel it should be the patient's choice.

In a country where liberties and freedoms of the individual are important, I think the better choice is to let the patient determine his or her own outcome and to act to his or her own peril.

At what point during that fourteen month period was your decision made that you wanted to die? Was the decision made quickly or over a period of time?

As soon as I ran out of the fire, I knew I had been badly burned. I began calling for help as soon as I was able to remove myself from the fire. A farmer who was nearby came to me and I asked him, almost immediately, to bring a gun. I made the decision early. I didn't even want to go to the hospital but I was taken anyway. Throughout my hospital stay, even when I reached the point during the last two of three months where I knew I would live regardless, it was still my desire not to live.

There was a short time early on, before the lawsuit with the oil company was settled, that I was wanting to live long enough for my attorney to settle the case because I knew my family would be better taken care of if I was a live plaintiff.

But as far as the question you're interested in, my answer is that I never did choose to live because of a change in attitude. The only change was when I felt I was going to live regardless and then I wanted to get out of the hospital as soon as possible.

Once I left the hospital and knew I would live, I was determined to give it my best shot and make the best of the life I did have left. There were many occasions I became depressed. In fact, there were two occasions I did

make an active effort to end my life after leaving the hospital.

In 1980, I was able to get a severe sleeping problem under control and since that time things have been much better for me.

Question: Many people familiar with your case have said that no one who is in such pain is able to make a rational decision, to weigh the present pain against the future good that would come from enduring the pain longer. How do you feel about that?

What I hear over and over again are questions about the severity of pain, just relentless pain for an extended period of time. That theory is completely ignored.

The pain is not an issue to those who feel the ultimate outcome is somewhat favorable once the patient leaves the hospital. Even though he or she is in severe pain for a period of twelve or thirteen months, the pain will pass. But it completely ignores the time that the patient is in the pain. It is much easier to ignore that pain is justification for refusing life-saving treatment when you're standing by the bed instead of in the bed.

I've talked to nurses, doctors, and social workers all across the country and I don't think that in the majority of cases physicians are doing what they can do to keep the patient comfortable. I don't think that we have the technology, although I think it's been proven with patient controlled anesthesia. I don't think we have the ability to keep a patient virtually free from pain as many people think we do. Pain control seems to be low man of the totem pole. Everything else comes first. That was my experience and many people have confirmed that at their hospitals.

Question: Did you make an attempt to leave the hospital?

I made every effort to get out. I could not get an attorney to help me to get out. I asked friends to help me and I called an ambulance service myself once I was allowed to use the telephone. There was an eight month period where I couldn't make a phone call. I wrote letters trying to get out. I even tried to talk to friends to bring a gun in. I tried to talk the nurses into giving me a lethal injection.

Question: Do you think the medical community is more receptive to requests such as yours?

Just in the last six to eight years I think I've seen progress in the direction of patient autonomy. When I first started speaking in 1982, physicians, and even the public, seemed to be much less in favor of patient autonomy than what I'm seeing and hearing now.

I've heard so many friends, people I've met, or people not related to the medical profession, who think that death is the ultimate evil. It doesn't matter what condition, just as long as I'm alive. Now I hear people say that if their in that kind of condition, usually meaning quadriplegic, maybe something like Quinlan even, they don't want to be kept alive. I think people's attitudes have changed.

One way I heard a medical school professor at Tech explain it was that many physicians look at death at the ultimate evil where its man's inhumanity to man that is the ultimate evil. We are talking about inhumanity to subject another human being to that type of physical pain.

Question: Do you think the doctors had your best interest in mind in treating you against your wishes or were they treating you as a kind of experiment?

I don't think they were treating me as an experiment. I never thought that. For the most part I do believe that they had my best interest at heart but I also feel what was more important to them than that was simply what they felt was their duty or obligation as physicians. I think that comes out clear.

When one views "Dax's Case", listen to the language the doctors are using. Their duty, their obligation, as physicians is to treat the patient. What comes across is that whether I choose to accept it or not is not important.

Question: Did you ever consider criminal litigation against your doctors?

No, I did not. I was not really in a very good position to once I left the hospital. I was not even able to walk. I could barely walk holding on to someone else's shoulder or arm, with them holding on to me. Even under those circumstances I could only walk twenty yards, something of this nature.

I was living at home with my mother and she was adamantly opposed to my refusing treatment. It would have been an intolerable situation at home if I had brought a civil suit against the hospital and physicians. It was pretty close to that anyway. The statute of limitations has long passed for any civil action.

What I'd probably would do if I had to do it over again would be to bring a lawsuit for the amount of the expenses while I was in the hospital since I was actively trying to refuse the treatment. I don't feel that I should be accountable for the expense.

Question: As a trained lawyer yourself, do you think your suit would be successful?

As a matter of law, I think there's definitely a cause of action. The doctor knows that informed consent is both

a medical and legal doctrine. In law, unless there's a situation such as an emergency with the patient unconscious where consent is presumed, the physician commits an assault and battery by treating a patient without his or her consent. We're talking about a mentally competent adult. There's definitely a cause of action, whether or not a jury is likely to award damages against a treating physician in that case, I don't know. It could be tough.

The people in Texas tend to look at physicians in a fatherly-like manner and are reluctant to return a verdict holding the physician liable for damages unless it's just gross negligence. It is changing though. People are becoming aware of some of the mistakes and some of the negligence acts that are occurring in hospitals and doctors offices.

Question: What role did your family play in the initial decisions to treat you against your wishes?

As stated earlier, my mother was adamantly opposed to my refusing the treatment. When my mother was told by the physicians that the possibility existed that I might be allowed to refuse treatment, she really would not hear of it. She was both insistent and persistent in regard to my treatment.

Question: Do you now have a living will or any other type of advance directive?

Yes, I do. I've had one for several years now and I feel its a good idea for anyone to have one.

I was asked earlier about how a physician can tell if a patient really wants to die. One of the best ways I know of is a prior directorate like a living will or durable power of attorney. While the individual is free from pain, free from the influence of whatever injury or illness, he or she makes the statement that in certain circumstances they wish not to be treated. In my case, I would simply be satisfied to say that as long as I could demonstrate any ability at all to reason, I would like final say so as to whether I did receive treatment.

Question: Running from the fire, surviving the treatment, and living your life happily now, seems to demonstrate a tremendous desire to live. How do you account for the discrepance between that and your stated desired to die?

Let me begin by repeating that I was in thirteen months of relentless, agonizing, pain. Beside the physical pain, one fact many people totally ignore is the boredom of being flat on one's back day after day. In many cases 18-20 hours a day because I would only sleep four to six hours a night. If any of you were told to go home and stay in bed for three days, never get up, and have very little interaction with other people other than a friend or

relative coming at visiting hours or a nurse attending you occasionally, I think you would be stir-crazy. Anyone would be.

There were things I'd would have much rather been doing with my life that I will never be able to do. I wanted to be an airline pilot, which would still be my first choice now. Lying in bed day after day for a fourteen month period took it's toll in itself in terms of what I had to go through.

What I've accomplished since that time does not justify having forced me to undergo it. That's the idea that the ends does not justify the means, whatever means necessary to achieve those ends.

I feel running from the fire was simply to remove myself from the immediate pain in the largest extent possible. That had nothing to do with wanting to live once I was out of the fire and realized that I was burned as badly as I was.

Once I did see that I would live regardless of refusing some of the treatment that I was allowed to refuse, I've wanted to give it my best shot and that's what I've tried to do. It's still a struggle everyday. There are frustrations that only someone in my condition or worse can imagine. Things are not always the way they appear and I think it takes looking far beneath the surface to get a true picture of what a severely handicapped individual has to go through and what life is like.

Question: Your mother's motivation was primarily religious for insisting on your treatment. How has this affected your own religious belief?

My religious views are the same as they were before. I will say my religious views are quite different from her's, and have been for most of my life.

I certainly do not agree with people that were characterizing my refusal of life-saving treatment as tantamount to suicide. I had relatives approach me with the religious argument that refusing treatment was the same as suicide. I didn't buy that and neither have the courts. The courts have generally recognized the rights of the patient to refuse treatment if he or she wishes if they are mentally competent.

There's four basic areas that these cases keep mentioning for not following the patient's wishes. One is the prevention of suicide. The patient causes his or her injury with the intent of ending his or her life and fails, is taken to the hospital, and wants to refuse treatment. The courts view that as helping the patient carry out his or her suicide. In other words, the patient set it in motion and for the hospital personnel to allow the patient to refuse treatment is deemed by the court to be suicide. In my case, I was not injured by myself or with any intent to die. If I refused treatment I would not have died by any injury inflicted by myself, merely by the underlying cause, which was the explosion.

Question: If you have a friend in the position you were in who asked you to bring him a gun, would you do it?

It's difficult for me to answer your question in the form you gave it. If it were a situation identical to mine I know I would be tempted and I could well possibly do it.

What I would prefer to do in a situation such as mine especially since I am an attorney is to afford the patient legal counsel to prevent unwanted treatment and to do whatever could be done to keep the patient as comfortable as possible. I have a difficult time answering your question without actually being in a specific situation.

Question: There's been a lot of talk lately because of the article in JAMA and because of experimentation in Holland with active euthanasia. What are your views? Do you think active euthanasia in a case like yours could be justifiable?

Although I'm cautious about moving into active euthanasia I guess as long as I can recall I have been imaginative of it. That's not something I've actually argued for in these speaking engagements.

I don't think there is anything of a substantial nature to be gained by requiring patient to go through a slow agonizing, so-called natural, death. In so many cases were just slowing down the dying process rather than extending life. I think it's inhumane to require a patient to go through that kind of agony simply to achieve a natural death.

What I do think we need to do is be very careful that if we do implement active euthanasia, it be entirely voluntary on the patient's part. The patient might be talked into doing this by family members or other's with ulterior motives, etc.

Question: What is your reason or purpose for living now?

I'm out of pain now and I felt since that time I wanted to make the best I could of what I have left. I want to give it my best shot. I am enjoying life much more than I felt I could even though there are many, many day-to-day frustrations.

I suppose I'm like any other person who's not disabled. Whatever the circumstances are, most people are trying to make the best of their lives in whatever way they know how. I feel essentially I'm doing the same thing.

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Advance Directives in Arkansas

Chris Hackler, Ph.D.*

In 1987 the Arkansas General Assembly replaced a ten-year-old "Death with Dignity" statute with Act 713, one of the most progressive pieces of advance directive legislation in the country. The new law recognizes proxy directives in addition to the more familiar instruction directives (or "living wills"), it clearly includes the permanently unconscious in its scope, and it grants authority to family members to refuse treatment for minors or for adults who have no advance directive.

Physicians should be aware of the provision of Act 713 for two sorts of reasons. First, there are important benefits for physicians as well as for patients and families in the use of such documents, and second, the new legislation contains legal penalties for failure to comply with a legitimate directive.

The article presented will first summarize the benefits to be obtained, then discuss the most important features of the Arkansas law, and finally explain the potential legal sanctions against physicians who refuse to follow an advance directive. A suggested form is also depicted.

Benefits

Advance directives extend patient autonomy or self-determination beyond a point of which it would otherwise be lost; this enhancement of autonomy is the primary ethical argument for respecting them. In addition, patients may realize important benefits from executing a directive. They may worry less about unwanted treatment if they have registered their preference in a legally recognized document; they may even seek medical care more readily if this fear is reduced. In addition, they may enjoy a greater sense of control over the unknown and greater self-respect for having assumed such control. Making or discussing an advance directive with a physician should

improve communication and trust, thus enhancing the doctor-patient relationship.

Physicians, too, benefit from greater patient confidence, communication, and trust. They also should find it easier to reach consensus with families on difficult treatment decisions. A clear indication of the patient's treatment preferences (or choice of proxy decision-maker) may avoid divisive family disputes and relieve the pressure to "do everything possible." Physicians as well as families may avoid nagging doubts that they acted improperly or gave up too soon. Concern about potential legal liability will be relieved if the patient has an advance directive. Finally, the survivors may face less burdensome medical bills if costly but ineffective treatments are not attempted.

The Law

Act 713 of 1987 is a comprehensive and carefully crafted statute, in contrast to the short and loosely worded law it replaces. It was based upon a model bill¹ and introduced by the Arkansas Bar Association with support of the Arkansas Medical Society, the Arkansas Hospital Association, the Arkansas State Nurses Association, and St. Vincent Infirmary Medical Center. It passed by large margins in both the Senate and the House of Representatives and took effect on July 1, 1987. The following features of the new legislation are noteworthy.

Permanent Unconsciousness

Most advance directive statutes apply only to the "terminally ill" or the "imminently dying." In these states it is unclear whether the law applies to patients in a permanent coma or a persistent vegetative state. The Arkansas statute avoids this uncertainty by clearly including permanently unconscious patients in its scope. It defines "permanent unconsciousness" as "a lasting condition, indefinitely without change in which thought, feeling, sensations and awareness of self and environment are absent."

* Dr. Hackler is the Head of the Division of Medical Humanities at UAMS. His address is UAMS, 4301 West Markham, Slot 646, Little Rock, Arkansas 72205.

One may execute a directive which is operative only in case of terminal illness, one which is valid only in case of permanent unconsciousness, or one which applies to both. If the form (Figure 1) shown is used, a line may be drawn through either provision if it is not wanted. A second physician must concur with the attending physician's assessment that the patient is in a terminal condition or is permanently unconscious. Space is provided for this purpose on the sample form.

Specific Instructions

The language suggested in the statute for an instruction directive is general: Treatment may be withheld or withdrawn which "only prolongs dying and is not necessary to my comfort or to alleviate pain." This particular language need not be used, however, or it may be supplemented with instructions about specific treatments. Since CPR is automatic in most hospitals without a DNR order, and since the withholding of antibiotics or of nutrition or hydration is still controversial, it would be prudent of patients who do not want these interventions to reject them explicitly in their declarations.

Proxy Directives

In addition to instruction directives (or living wills) the law recognizes proxy directives, so that a specific person can be named to make decisions for the incompetent patient. Proxies are frequently family members, but they need not be. The important thing is to specify a proxy who has some knowledge of one's treatment preferences and who can be trusted to follow them. The proxy directive has been endorsed by the President's Commission for the Study of Ethical Problems in Medicine as of equal importance to the instruction directive.² Unlike patients who cannot always envision the circumstances of their incapacity, proxies know the particular medical situation and have access to the most current medical knowledge. Physicians may also benefit from a proxy directive in that they have a designated agent of the patient with whom to discuss treatment options rather than a divided family to face or a static set of instructions to interpret.³

Surrogate Directives

The statute acknowledges directives only of adults (age 18 or older). But it authorizes parents, legal guardians, or others to execute a directive on behalf of a minor child who is terminally ill or permanently unconscious. It also authorizes surrogates to make directives for adult patients who have not made one themselves. In most states the medically accepted practice of turning to family members for direction is not explicitly sanctioned by law, but in Arkansas it is. A directive may be executed on behalf of an otherwise qualified patient (that is, one who is terminally ill and no longer able to make health care decision, or who is permanently unconscious) by the first available individual in the following order:

1. A legal guardian of the patient, if one has been appointed.
2. In the case of an unmarried patient under the age of 18, the parents of the patient.
3. The patient's spouse.
4. The patient's adult child, or if there is more than one, then a majority of the patient's adult children participating in the decision.
5. The parents of a patient over the age of 18.
6. The patient's adult sibling, or if there is more than one, then a majority of the patient's adult siblings participating in the decision.
7. Persons standing in loco parentis to the patient.
8. A majority of the patient's adult heirs at law who participate in the decision.

Miscellaneous Features

A valid directive requires two witnesses, but no stipulations are placed on who can serve in that capacity. Declarations may be revoked at any time whether or not the patient is deemed competent. When a valid directive is followed, death is neither a suicide nor a homicide, and life insurance benefits cannot be withheld. Physicians are not required to take any action contrary to reasonable medical standards. Directives executed under the laws of another state are recognized as valid in this state, as are directives executed under the previous Arkansas law. Finally, and most importantly, the statute does not say that treatment may be limited only if the provisions of the Act have been followed. As long as physician and family agree on the decision and the medical facts warrant it, treatment may be withdrawn without any written directive. The law only clarifies one avenue; it does not close others.

Penalties

If the provisions of the Act are followed, then there can be no legal liability for a consequent death. There are, however, certain penalties for ignoring a patient's directive. If a physician determines that a patient is terminally ill or permanently unconscious and knows that the patient has an advance directive, then the terms of the directive must be entered in the patient's record. If the physician is unwilling to comply with the patient's directive, then "all reasonable steps" must be taken to transfer care of the patient to another physician. Failure to record the directive or to transfer care is a Class A misdemeanor, punishable by a fine of up to \$1,000 or imprisonment for up to a year.

Though there are penalties for noncompliance, physicians still must exercise discretion in following advance directives. Patients cannot foresee all the circumstances of a catastrophic illness; thus a decision must be made whether the directive applies to the present situation. Living wills typically contain quite general language, referring perhaps to "heroic" or "extraordinary" care or to

Figure 1. Sample of Living Will Declaration.

8

Living Will Declaration

If I should have an incurable or irreversible condition that will cause my death within a relatively short time, and I am no longer able to make decisions regarding my medical treatment, I direct my attending physician, pursuant to the Arkansas Rights of the Terminally Ill or Permanently Unconscious Act, to withhold or withdraw treatment that only prolongs the process of dying and is not necessary to my comfort or to alleviate pain.

If I should become permanently unconscious, I direct my attending physician to withhold or withdraw life-sustaining treatments that are no longer necessary to my comfort or to alleviate pain. These life-sustaining treatments that may be withheld or withdrawn include, but are not limited to:

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You may delete any item or provision above by drawing a line through it and adding your initials. You may also add any further instructions here:

OPTIONAL PROXY DIRECTIVE

I direct my attending physician to follow the instructions of _____
_____, residing at _____
_____, phone _____, as my Health Care Proxy,
to make medical treatment decisions on my behalf consistent with my wishes.

Signed this _____ day of _____, _____.

Signature _____

Address _____

The declarant voluntarily signed this writing in my presence.

Witness _____

Address _____

Witness _____

Address _____

Additional copies may be obtained from The Division of Medical Humanities,
College of Medicine, University of Arkansas for Medical Sciences,
4301 West Markham Street--Slot 646, Little Rock, Arkansas 72205.

treatment which only prolongs the process of dying. Such language must be interpreted and applied to the particular case in a flexible and sensitive manner. It is difficult to believe that a physician would ever be penalized for acting on the good faith judgment that the patient would not really want a specific treatment withdrawn. But the law does place the burden of proof on the physician to justify setting an advance directive aside.

The sample form (Figure 1) is based upon forms developed by the Society for the Right to Die (250 West 57th Street, New York, NY 10107). It is by no means the only acceptable one. Patients may compose their own declarations (though physicians might suggest alternative wording which would be more helpful to them in carrying out the directive). When a terminal disease has been di-

agnosed and the likely course of events can be foreseen, physicians may help the patient develop a declaration which will anticipate specific treatment decisions. But any directive is acceptable which is faithful to the spirit of the new law.

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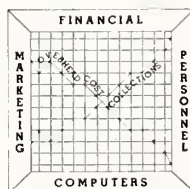
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Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

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Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

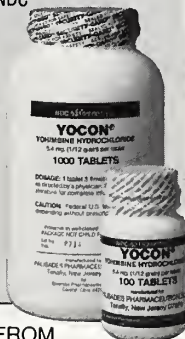
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon[®] 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
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All inquiries are confidential within the Committee and no names or locations are necessary when contact the Society office.



Remedy for Frivolous Malpractice Actions

Michael W. Mitchell, J.D.*

Medical malpractice actions, while always tortuous, are legally unacceptable when they are filed without probable cause. In addition to the individual suffering and loss to the physician who is improperly sued, frivolous malpractice actions result in increased defense costs which eventually will increase insurance premiums for everyone. When frivolous medical malpractice actions are filed, there are remedies available as a deterrent.

Malicious Prosecution

The traditional weapon against a frivolous malpractice action is a suit for malicious prosecution against the patient and/or the patient's attorney. The elements required to successfully prove a malicious prosecution case are as follows: 1) Institution or continuation of a malpractice suit; (2) malpractice suit terminated in favor of the physician; (3) malice on the part of the patient or patient's lawyer; (4) lack of probable cause in filing the action; (5) damage suffered as a result of the action.¹

The most difficult issue to prove in a malicious prosecution case is lack of probable cause.² Probable cause may be defined as "reasonable grounds to believe a cause of action exists, supported by the facts and circumstances of the case".³ It is the principal duty of the patient to provide his or her lawyer with a full and fair statement of all the relevant facts. Compliance with the duty of full and accurate disclosure protects the patient from a subsequent malicious prosecution case, since it has long been the rule in Arkansas that advice of an attorney after full disclosure of all the facts is a complete defense.⁴ The

attorney "... must diligently investigate the facts and may not rely solely on the client's contentions that there is 'probable cause' to file suit".⁵

Historically, successful malicious prosecution actions by physicians against attorneys have been rare, although they have been occurring on a more frequent basis in modern times. For example, a cause of action is made out against an attorney where the patient had asked the attorney not to sue the physician.⁶ In this case, the physician had repaired the patient's broken limb with a pin which proved to be defective. The physician suggested that the patient might wish to sue the manufacturer of the pin. The patient contacted his attorney and advised the attorney to sue the manufacturer not the physician. Nevertheless, the attorney sued the physician for medical malpractice. After losing the initial suit, the attorney was successfully sued for malicious prosecution.

Another example occurred in Tennessee where the attorney brought a medical malpractice action based upon "speculation, rather than upon a proper investigation of the facts".⁷ In the Tennessee case, the patient was tentatively diagnosed as having gonorrhea but was told that a final diagnosis would be made only after her laboratory test results were received. Two weeks later the patient returned to find that the laboratory tests were negative. A suit was filed for negligent diagnosis and alleged kickbacks from the laboratory.

In the later successful malicious prosecution case, it was shown that the attorney, who later surrendered his license to practice law, had no reason to believe the physician, a noted gynecologist who subsequently became President of the Tennessee Medical Association, had engaged in fee-splitting. There was no effort to prove or support the allegations and there were no facts at all to

* Mr. Mitchell is the General Counsel for AMS and questions for "Legally Speaking" can be addressed to the Society office at Post Office Box 5776, Little Rock, Arkansas 72215.

do so. Furthermore, it was shown that the laboratory tests were available 48 hours after the initial visit, but the patient did not call the physician's office for the report.

Another successful malicious prosecution case occurred in Kentucky where the patient's shoulder was injured during hospitalization for a cardiac ailment and the suit was against a radiologist and an orthopedist.⁸ The two physicians were later dismissed because neither had even seen the patient prior to the injury, but had been called in *after* the shoulder fracture to treat the patient.

Another example recently occurred in Arkansas.⁹ In the Arkansas case, the physician recovered a jury verdict for malicious prosecution against a Benton attorney. The case involved a problem patient with diabetes. The patient had been seen many times by Dr. Kirk and on the last occasion was sent to him with infected callouses on his feet. Since there had been no antibiotics for a week and since there was no drainage from the foot, no culture was taken.

The physician started the patient on Ancef, cultured his urine and sputum, and started local treatment on his feet with whirlpool and hyperbaric oxygen. However, the infection grew worse and the patient was referred to the Medical Center where an amputation of one foot was performed. A malpractice suit was filed claiming the use of the wrong antibiotics. The use of antibiotics would not have mattered since there was no palpable pulse in his foot and the antibiotics could not have penetrated the infected area.

No valid medical witness was ever produced to prove that the physician was practicing below the standard of care. There was evidence that the attorney had failed to work the case up in a proper manner and testimony from his former secretary pertaining to statements of "hate" about the physician. Although success appears to be on the rise, malicious prosecution cases were found by one writer in 1980 to have only a 6% success rate.¹⁰

Court Sanctions

There are several tools to sanction attorneys against frivolous malpractice actions. First, there is Rule 11 of the Arkansas Rules of Civil Procedure which was adopted by the Arkansas Supreme Court in 1983. Under Rule 11, the signature of an attorney amounts to an affirmation that he believes the pleading to have merit in fact and law, and it is a breach of the attorney's duty to file pleadings without a good faith basis.¹¹ The difference in Rule 11 proceedings and those for malicious prosecution is that the judge has the power to impose sanctions directly on the attorney and/or the attorney's client without a new suit being filed. While in a malicious prosecution, the successful result would be damages, under Rule 11 the court can impose sanctions upon the offending attorney and the client as well as an assessment of attorney's fees. In addition, under a 1987 law passed by

the legislature, a judge has given the power to assess up to \$5,000 attorney's fees against the losing party or his attorney for frivolous actions.¹²

Professional Sanctions

Under Rule 3.1 of the Arkansas Rules of Professional Conduct, a lawyer may not ethically bring or defend a proceeding which is determined to be frivolous. In other words, the lawyer must have the factual and legal basis for any such action or a good faith argument for an extension, modification or reversal of existing law. Therefore, in the event of a frivolous malpractice action, a complaint can be lodged with the Professional Conduct of the Arkansas Supreme Court for unethical conduct.

Conclusion

The successful malicious prosecution cases cited in this article are but a small percentage of the overall malicious prosecution cases filed. These successes do not signal a physician stampede to file malicious prosecution actions when they are sued for malpractice. Courts still do not favor such actions and afford the widest latitude to attorneys to pursue their client's cause of action "without fear of retaliation". Even a successful malicious prosecution case may not result in damages sufficient to cover the cost of prosecution.

One writer describes the recent successes as signifying "... nothing more than the *mere possibility* of a successful countersuit ... when attorneys flagrantly abuse their professional prerogatives by filing false ... claims against physicians who are known from the outset to be innocent of any wrongdoing".¹³

Nevertheless, the increased success rate of malicious prosecution actions, the adoption by the Supreme Court of Rule 11 and 3.1 and the adoption by the Arkansas Legislature of Act 601 of 1987, sends a clear message to the legal community that frivolous malpractice actions will no longer be tolerated.

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University of Arkansas for Medical Sciences Medical Student Awards

Edwina Walls, M.L.S., George W. Warner, and William G. Reese, M.D.*

This paper is part of a trilogy which summarizes College of Medicine awards to medical students, housestaff members, faculty and Arkansas Caduceus Club members. The majority of students became or will become members of one or more of these groups and members of the Arkansas Medical Society. Listed are two kinds of awards to medical students: those strictly for scholastic attainment (scholastic awards), and scholarship/loans for which financial need is usually one of the criteria for selection. Each section is subdivided into discontinued and continuing recognition. Up to the present, most awards have been listed in the official bulletins, but undoubtedly some early awards were not recorded. We believe that our summaries will be informative for current readers and for future historians. This paper also will help physicians to advise potential medical students about some sources of financial assistance available to them.

Scholastic Awards

Discontinued Scholastic Awards

The first awards for scholarship in this School (now College) recognized the best achievement in examinations in various subject areas. In 1881, Dr. William Thompson of Little Rock provided \$25 to the top student in anatomy and Dr. Isaac Folsom of Lonoke presented a book to the top student in physiology. During ensuing years various, physicians provided awards for different courses. Dr. Thompson's prize was replaced in 1906 by the *James A. Dibrell Anatomical Prize* which continued through 1914.

The Faculty, from 1881 - 1914, presented a \$25 pocket-case of instruments for the best dry anatomical preparation, and a gold metal (1883 - 1900) provided by Dr. J. M. Keller of Hot Springs was given for the best examination in surgery. The Arkansas Medical Society presented annually, from 1893 - 1919, a gold medal for "the best examination in all branches of study." From 1900 - 1914, Dr. Frank Vinsonhaler provided a case of instruments for the best examination in ophthalmology. One

of these inscribed cases is now in the History of Medicine collection. No record of awards was found for the period 1921 - 40.

The catalog for the school year 1940/41 (hereafter designated by the close of the school year, viz. 1941) announced: "It is the aim of the faculty to provide to the student body every stimulus for excellence." To that end, Governor Carl E. Bailey provided a large gold cup for the fraternity or group attaining the highest scholastic record, with the name of the group inscribed on the cup (now housed in the Robert Watson History of Medicine Room of the UAMS Library). A small replica of the "Bailey Cup" was retained by the winning group. This tradition continued through 1953.

The catalog for the 1941 session also contains the first mention of the Buchanan Keys which are still awarded. For other continuing awards, the first mention of the Faculty Gold Key was in 1943 and of the Roberts Award in 1948. More detail about these awards is provided in the next section.

The *Fount Richardson Memorial Award*, established in 1963 by the Medical Education Foundation for Arkansas of which Dr. Richardson was an organizer, made available five microscopes for use by freshmen students. This award was discontinued in 1979.

Many other awards of short duration are unlisted but gratefully acknowledged.

Continuing Awards¹

Each year outstanding students are recognized for their scholastic attainment, professional potential and personal attributes. Recipients are nominated. Some are selected by the Awards and Scholarship Committee of the College and others are confirmed by this Committee. Awards of this type are:

Faculty Key. This gold key, "the highest honor awarded to a student," was established in 1943 for "the outstanding student for four years." Recognizing schol-

* Head, Special Collections, UAMS Library, 4301 West Markham, Slot 586, Little Rock, Arkansas 72205.

¹ Continuation of the first three (most prestigious) awards is not guaranteed by endowment funds. Perhaps previous recipients and/or their friends will provide gifts to ensure continuation.

arship, initiative, scientific and professional interest, and ethical and moral standards, the selection is now based on the vote of the entire faculty attending the annual spring meeting of the College of Medicine.

Buchanan Key. One recipient from each class is selected annually on the basis of scholastic achievement and the vote of classmates. The award was established in 1941 by Dr. A. S. Buchanan of Prescott (a 1905 graduate) and, although not endowed, is continued by two daughters. In early years the Key was presented to the student attaining the highest scholastic record in each class with \$100 to the best of the four.

Roberts Key. Established in 1948, the gold key is awarded to the graduating senior who has attained the highest grade point average (GPA) for the four years in medical school. The award, at first a key and a prize, was financed originally by Dean Joseph T. Roberts in honor of his father and his sons as *The James Thomas Roberts Medical Scholarship Award*. The award has been continued by the family.

The *Winston K. Shorey Award*, instituted in 1976 in memory of Dean Shorey, consists of a bronze medallion and \$500 presented annually to the graduating senior "who in the eyes of his classmates exhibits compassion, warmth, kindness and human qualities toward patients, their families, peers and hospital personnel."

The *H. Elvin Shuffield Medical Leadership Award*, a medallion, was initiated in 1986 in honor of Dr. Shuffield and is awarded annually to a senior medical student on the basis of outstanding leadership while in medical school and of future promise as a physician.

The *Upjohn Achievement Award*, initiated in 1986, consists of a plaque and cash awarded to a graduating senior for outstanding contribution in medical research.

The *Janet M. Glasgow Award of Outstanding Achievement*, initiated in 1986, provides a citation to a graduating senior woman if she has the highest GPA in her class.

The *American Medical Women's Association Achievement Citation*, since 1986, goes to all women who graduate in the top ten percent of their class. When established in 1967, it included a cash award to the woman who achieved the highest GPA in the senior class.

Other awards are made for accomplishment or promise in particular fields of medicine. The *Roche Award* was instituted in 1950 as an award to a sophomore student who, in the opinion of the pre-clinical faculty, best exemplified the ideals of the modern American physician. Today the recipient of a plaque and cash is a graduating senior "who, in the eyes of his/her classmates, integrates basic medical knowledge with the ability to relate to patients in such a way as to come closest to the ideal of a person preparing to enter a primary care field."

In 1986, several departments established awards (combination of plaque, certificate and sometimes cash) to honor graduating seniors for accomplishment and/or potential in particular fields. These are: the *Purdie*

Frederick Award in obstetrics/gynecology; the *Calvin J. Dillaha Award* in dermatology; the *Family Practice Award*; and the *Marie Wilson Howells Student Award* in psychiatry.

Also in 1986, awards for accomplishment in particular courses (with plaque and usually cash) were established: the *Neuroscience Award*; the *Horace N. Marvin Award* (microanatomy); the *John Whitney Excellence in Physiology Award* and since 1978, the *Hans Schulumberger Excellence in Pathology Award*. The *Edward Forrest Ellis Award*, initiated in 1969, consists of a gift for the purchase of surgical texts to the junior student showing the most promise in surgery. Other book awards for scholastic and/or other achievement are made by Ciba Pharmaceutical Co., Lange Medical Publications, Merck and Co. and C.V. Mosby Co.

Scholarships/Loans²

Discontinued Scholarships

As early as 1930, the Women's Auxiliary of the Arkansas Medical Society donated funds to match federal grants available for assistance to medical students.

Although a "loan fund" and not a scholarship in current terminology, the initial funds to provide assistance to medical students were deposited in a "Student Loan Fund." In 1936, coinciding with the centennial year of Statehood for Arkansas, the fund became the "Medical Centennial Loan Fund." That year, a freshman medical student, Hollis H. Buckelew, suggested that medical students surrender to the fund all of their "chemistry break-age refunds." Later, the net profits of the bookstore went into the fund. The 1987 Bulletin carried the last listing of the "centennial fund," which is now incorporated with the "Memorial Loan Fund."

In 1960, there were 68 outstanding loans at an average of \$445. When Dr. William C. Langston wrote a history of the fund in 1961, he expressed a dream that the loan fund would reach one million dollars by 2036. Currently, the magnitude of loans and scholarships to our medical students is about four million dollars. (These funds must continue to grow to meet the ever-increasing cost of medical education which considerably outdistances the ability of the State of Arkansas to produce the tax dollars necessary for a medical school of excellence.) Matriculating students still come from families of modest means. In 1950, tuition for four years was \$1,500; today tuition charge is near \$25,000. Seventy-eight percent of the current student body are substantially dependent on student assistance. Tuition costs continue to increase more rapidly than inflation or average income.

For brevity, we shall list only a few long-time scholarships, noting that numerous other scholarships and loans have been provided in past years.

² Note by Reese and Walls: Among his many significant contributions to this College, our recently retired co-author, Warner, properly organized and coordinated student loan programs.

The *Pfizer Laboratories Medical Scholarship*. From 1953 - 1972, the Pfizer laboratories of New York donated \$1,000 annually to be divided at first among one to three freshman or sophomore students and later to be awarded in the fall of the senior year to the outstanding junior of the prior year.

The *New York Life Insurance Company Medical Student Scholarship*, from 1966 - 1977, provided funds for the full cost of attendance for four years of medical school for a needy student. Our school was one of eleven schools initially selected to administer the scholarship program.

The *Rand Memorial Scholarship* was awarded to an incoming freshman on the basis of financial need and scholarship from 1969 - 1977. Funds were provided by family and friends of the late Dr. Howard A. Rands, a 1928 graduate, who practiced for many years in Dumas, Arkansas.

Present Scholarships

Today there are three distinct scholarship/loan classifications: Honors, General, and Service-connected.

Honors scholarships are awarded solely on the basis of scholastic achievement. Recipients, selected or confirmed by the Awards and Scholarship Committee of the College which reports to the Dean of Student Affairs, are entering freshmen selected on the basis of GPA and Medical College Admission Test (MCAT) scores or upperclassmen selected by academic class standing.

General scholarships and loans, based on scholarly accomplishment and need, are administered by the Director of Student Financial Aid and, in contrast to the previous category, are subject to State and Federal audit because of "need" stipulation.

Service-connected scholarships require a year of stipulated service per year of assistance provided.

Honors

The *Barton Foundation Scholarships* are supported by an endowment of \$400,000 given to the School of Medicine in 1964 by Mrs. T.H. Barton of El Dorado. For this award, approximately eight students from each class are selected annually on the basis of scholastic achievement.

The *Dr. and Mrs. F. C. Maguire Memorial Scholarship* was established in 1966 by an anonymous donor in honor of Dr. Maguire who practiced in Augusta, Arkansas for many years, and of his wife who was active in many community affairs. The sum of \$300 is awarded each year to a deserving student entering the sophomore class.

The *Dr. James Gentry Thomas Memorial Scholarship*, established in 1967 and endowed by friends of Dr. Thomas and his family, honors Dr. Thomas who graduated from the College of Medicine in 1956. Each year, \$500 is awarded to a junior student on the basis of scholarship, professional promise and need.

The *Dr. and Mrs. George S. Wise Annual Scholarship* was established in 1976 from an endowment contributed by Mr. and Mrs. Murry J. Sarlin in honor of Dr. and Mrs. Wise. Dr. Wise was the prime motivator in establishing Tel Aviv University in Israel. Approximately \$500 goes to an entering junior student to recognize outstanding academic achievement.

The *Susan Campbell Rector Memorial Scholarship*, established in memory of Dr. Campbell (Class of 1979) by her family and friends, awards approximately \$750 annually at Convocation to the most outstanding senior woman medical student who has chosen obstetrics and gynecology for a medical career.

General

The *Southern Medical Association Medical Student Scholarship*, since 1971, provides \$500 to an incoming freshman student who has demonstrated scholastic achievement and financial need. In addition, a student representative from the junior class receives travel expenses to the annual meeting of the Southern Medical Association.

The *Dr. E. M. Gray Scholarship* was established in 1973 by Dr. Gray, who was a long time Arkansas practitioner at Evening Shade and Mountain Home. The scholarship is based primarily on need in addition to academic performance.

The *Arkansas Caduceus Club Loan Fund*, established in 1977, assists students whose character and ability indicate a career of professional skill and humanitarian service in the practice of medicine. The assistance provided per student is up to \$1,000 each academic year in the form of low interest, long-term repayable loans.

The *Dorothy Snider Foundation Scholarship* was founded in 1981 by the late Dorothy Snider of Manila, Arkansas, to assist students from northeast Arkansas or western Tennessee who are likely to practice in Arkansas or Tennessee. Recipients are selected on the basis of need, character, and ability to achieve careers of high professional skill and humanitarian service. Awards range from \$500 to \$1,000.

The *Carolyn and Joe Tenenbaum Scholarship* was established by a charitable trust given in 1982 by the Tenenbaum family of Little Rock to assist students in pursuit of their medical careers. Available to students in any class, selection is based on financial need, character, and scholastic achievement.

The *Aristo Brizzolara, Sr., Memorial Loan* was established in 1983 by the late Dr. Charles M. Brizzolara, Class of 1936, in memory of his uncle. The amount loaned to a student cannot exceed the lesser of tuition cost or the student's financial need.

The *Eddie Ball Memorial Scholarship* was founded in memory of Eddie Ball who was in the sophomore class in 1984. The fund was established by his class and the E. B. Ball family of Eudora, Arkansas and provides a \$1,000

scholarship to a sophomore who demonstrates financial need, diligence in the pursuit of studies, and the desire to become a humane and understanding physician.

The *Pulaski County Medical Society Scholarship* was founded in 1984 to honor a designated member of the Society who has made an outstanding contribution to the betterment of society through medical accomplishment. It is awarded each year to an entering freshman who is a permanent resident of Pulaski County, and the recipient receives approximately the cost of tuition.

The *McMath Law Firm, P.A. Scholarship* established by the Little Rock firm in 1986 provides the cost of tuition for an entering sophomore student. Selection is based on scholastic performance as a freshman and financial need.

The *Franklin C. McLean Scholarship* is awarded by the National Awards Committee of the National Medical Fellowship, Inc. Our College and others nominate a black member of the graduating class based on analysis of academic excellence, community service and leadership among classmates. The chosen recipient receives \$2,500.

The *Robert Homer Bryant Memorial Scholarship* awards approximately \$500 annually to a medical student who demonstrates merit and need. The fund was established in 1986 by Mrs. Frances Bryant Edens of Corsicana, Texas, in memory of her father, an alumnus of the College.

The *Dr. Edwin F. Gray Scholarship* was established in 1986 by Dr. Gray, a Little Rock physician alumnus of the College, who provided an endowment to provide annual scholarships to students demonstrating academic promise and need.

The *Arkansas Caduceus Club Scholarship*, established in 1987, provides two full-tuition scholarships yearly to entering freshman students. The scholarship is awarded on the basis of intellect, character, and compassion.

The *Northeast Arkansas Internal Medicine Clinic Scholarship*, established in 1987 by the Jonesboro clinic, pays annually full tuition for the freshman year for a medical student who has demonstrated superior academic achievement and outstanding potential for a career in medicine.

The *American Medical Association - ERF Scholarships*, financed by funds raised by the Auxiliary of the Arkansas Medical Society, are awarded annually based on financial need and academic excellence.

Service-Connected

Arkansas Rural Medicine Practice Loans were established by an Act of the General Assembly which has been amended, most recently by Act 151 of 1987. Following training these loans require payback by practice in a medically underserved area in Arkansas. Alternatively, in lieu of service, payback may be cash with interest.

The *Armed Forces Scholarship Program* provides a limited number of scholarships to cover the cost of tuition, fees, books and equipment. There is a two-year service obligation in the Army, Air Force, or Navy for the first two years in the program, and thereafter, six months of service for six months of medical school education.

Conclusion

A short summary does not provide the space to acknowledge the many, including Associate Dean Ture W. Schoultz, who provided information. We hope that the others will settle for anonymous satisfaction for a useful service.

Students desiring information about scholarships and/or loans may contact Tom G. South, Director, Medical Student Financial Aid, UAMS College of Medicine, Slot 709, 4301 West Markham, Little Rock, Arkansas 72205, (501) 686-5813.

Anyone wishing to establish a scholarship, donate a memorial loan fund, etc., may contact Janet Honeycutt, Executive Director, Arkansas Caduceus Club, UAMS College of Medicine, Slot 642, 4301 West Markham, Little Rock, Arkansas 72205, (501) 686-5920.

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1. Catalogues and Announcements, College of Medicine, 1879 to present.
2. Reese, W. G. Recognitions by the College of Medicine UAMS: Faculty and Caduceus Club. *Journal of Arkansas Medical Society*, 84:514-16, 1988.

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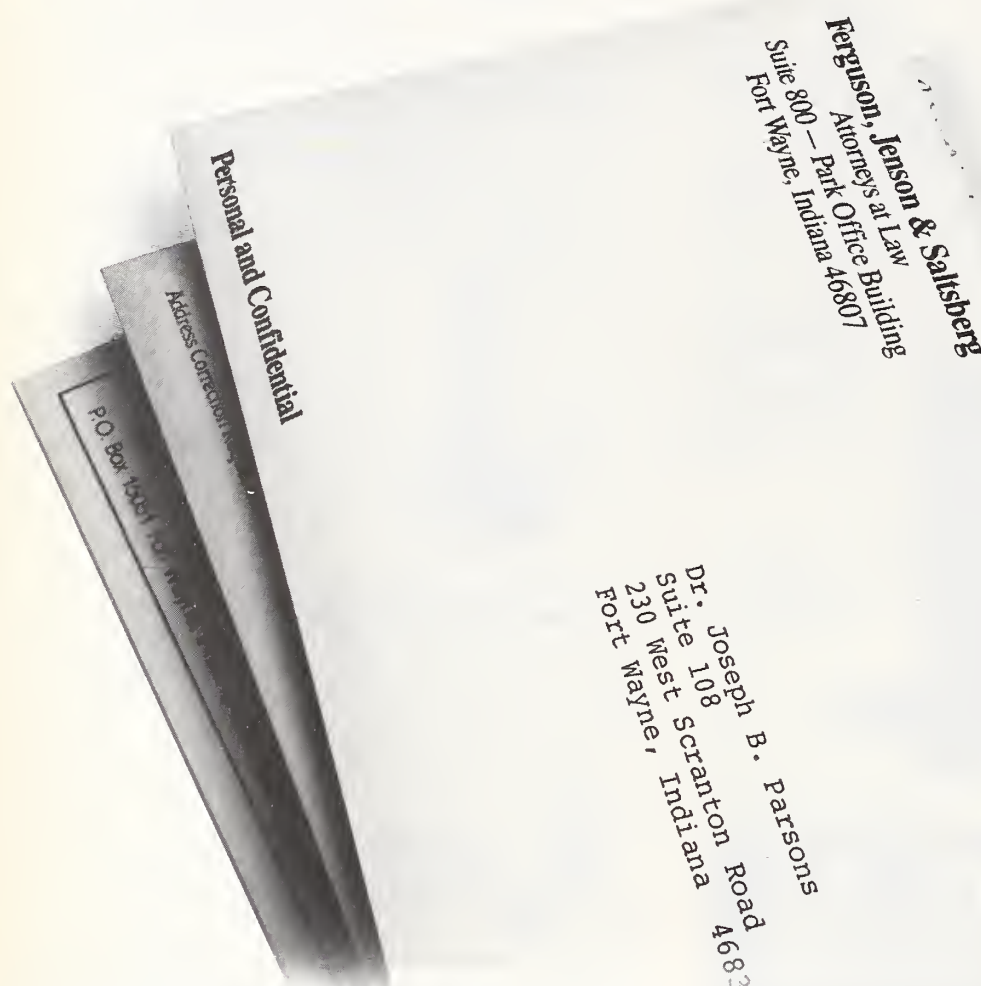
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DALE L. TIPTON, M.D.

Associate Clinical Professor, Department of Otolaryngology, Head and Neck Surgery, University of California School of Medicine, San Francisco, California.

Chairman, Division of Otolaryngology, Franklin Hospital, San Francisco, California.

Lieutenant Colonel, U.S. Army Reserve.

EDUCATION University of California at Berkeley, A.B. Physiology; University of California School of Medicine, San Francisco, M.D. and Master of Science, Pharmacology.

RESIDENCY University of California School of Medicine, San Francisco: General Surgery — 2 years; Otolaryngology — 3 years.

FELLOWSHIPS National Institute of Health Fellow; Cancer Research Institute, University of California, San Francisco.

OUTSTANDING ACHIEVEMENTS Freshman Medical Student Research Award; Class President — 2nd year medical school; Student Body President — senior year medical school; Special Award by National Institute of Health to attend and present paper at International Congress of Otolaryngology in Tokyo, Japan; Chairman, Department of Otolaryngology, San Francisco General Hospital 1970-76; Chief of Medical Staff, Franklin Hospital 1982-84.



Dr. Tipton and residents examining post-operative patient in recovery room.

“I joined the Army Reserve shortly after completing my responsibilities as Chief of Staff of Franklin Hospital in San Francisco. I was intrigued with the idea of trying something different, such as Army Medicine.

“I find that the challenges and rewards of serving as an Army Reserve physician complement my civilian practice. For a number of years, I’ve been teaching as a member of the Clinical Faculty at the University of California School of Medicine, and I thoroughly enjoy the many teaching opportunities available to me in the Reserve. It is a rewarding experience to be involved in the training of Army medical students, interns, and residents. I also enjoy interacting and exchanging information with full-time Army physicians and seeing a wide variety of interesting clinical cases.

“After 18 years of private practice, I find it stimulating to be able to use my experience and expertise in a totally different medical setting. I highly recommend Army Medicine to any interested physician.”

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Indications and Usage: Axid is indicated for up to eight weeks for the treatment of active duodenal ulcer. In most patients, the ulcer will heal within four weeks.

Axid is indicated for maintenance therapy for duodenal ulcer patients, at a reduced dosage of 150 mg b.i.d. after healing of an active duodenal ulcer. The consequences of continuous therapy with Axid for longer than one year are not known.

Contraindications: Axid is contraindicated in patients with known hypersensitivity to the drug and should be used with caution in patients with hypersensitivity to other H₂-receptor antagonists.

Precautions: General—1. Symptomatic response to nizatidine therapy does not preclude the presence of gastric malignancy.

2. Because nizatidine is excreted primarily by the kidney, dosage should be reduced in patients with moderate to severe renal insufficiency.

3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

Laboratory Tests: False-positive tests for urobilinogen with Multistix[®] may occur during therapy with nizatidine.

Drug Interactions: No interactions have been observed between Axid and theophylline, chloridazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system, therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,900 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility: A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterochromaffin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high dose males compared to placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (30%) weight decrement

compared to concurrent controls, and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive, and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery is not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, and the mouse lymphoma assay.

In a two-generation, perinatal and postnatal, fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy—Teratogenic Effects—Pregnancy Category C—Oral reproduction studies in rats at doses up to 300 times the human dose, and in Dutch Belted rabbits at doses up to 55 times the human dose, revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: Nizatidine is secreted and concentrated in the milk of lactating rats. Pups reared by treated lactating rats had depressed growth rates. Although no studies have been conducted in lactating women, nizatidine is assumed to be secreted in human milk, and caution should be exercised when nizatidine is administered to nursing mothers.

Pediatric Use: Safety and effectiveness in children have not been established. **Use in Elderly Patients:**—Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,900 patients given nizatidine and over 1,300 given placebo. Among the more common adverse events in the domestic placebo-controlled trials, sweating (1% vs 0.2%), urticaria (0.5% vs ~0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported; it was not possible to

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determine whether these were caused by nizatidine.

Hepatic—Hepatocellular injury, evidenced by elevated liver enzyme tests (SGOT [AST], SGPT [ALT], or alkaline phosphatase), occurred in some patients possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L), and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular—In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

Endocrine—Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecostasia occurred.

Hematologic—Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H₂-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs.

Integumental—Sweating and urticaria were reported significantly more frequently in nizatidine than in placebo patients. Rash and exfoliative dermatitis were also reported.

Other—Hyperuricemia unassociated with gout or nephrolithiasis was reported.

Overdosage: There is little clinical experience with overdosage of Axid in humans. If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance by approximately 84%.

Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous LD₅₀ values in the rat and mouse were 301 mg/kg and 232 mg/kg respectively.

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James Henry Southall, M.D. 1841 - 1901

Fred O. Henker, M.D.*

Son and grandson of highly respected Virginia physicians, James Henry Southall was born November 5, 1841 in Smithfield, Virginia. He spent most of his boyhood in Norfolk, receiving his early education in academies there and in North Carolina.¹

He began his medical studies under Dr. Robert Turnstall of Norfolk, leaving at 17 to attend medical lectures at the University of Pennsylvania in 1859.² With war clouds looming he transferred to the University of Louisiana at Tulane where he graduated March 1, 1861 at the age of 19.³ He immediately volunteered for the Confederate Army and was assigned to the 55th Virginia Infantry at the rank of assistant surgeon. Dr. Southall was promoted to full surgeon in 1862. He served until the end of the hostilities in 1865.⁴

Dr. Southall returned to Norfolk for nine months and then moved to Memphis, Tennessee. He met and married Olivia Gertrude, the daughter of Major John James Murphy. Their marriage was blessed by two daughters, Alice and Edith.⁵

The family left Memphis and moved west to Marion, Arkansas (Crittenden County). In 1872, Dr. Southall came to Little Rock, establishing his office at 125 Main, above Hughes Drug Store⁶ and his home at 804 West Third Street.⁷ He was soon considered one of the community's most respected and public-spirited physicians and was known as a systematic scholar with a memory for details. He became active in city, county and state medical organizations as well as the American Medical Association and Medico-Legal Society of New York.⁸

Unfortunately, Dr. Southall arrived just in time to become embroiled in the infamous Almon Brooks dispute which split both the county and state medical organizations. Southall took a conservative stance, expressing his sentiments this way:

"My acquaintance with the inside manipulation of medical organizations, particularly this state, within the

*past five years, affords me ample proof that under the regime of your society proposes the same cannot result in either professional scientific attainment...or society intimacy or fraternity among the profession. The join the seceding physicians for no purpose other than to achieve harmony would be a humiliating course."*⁹

Evidently differences were resolved and Southall joined Dr. P. O. Hooper in the formation of the Medical Department of Arkansas Industrial University (now UAMS) in 1879, being appointed Professor of Physiology until 1886 when he assumed the professorship of Theory and Practice of Medicine upon resignation of Dr. Hooper. It appears that association with the medical school added greatly to his recognition and prestige as his private practice in 1879 grossed \$3,200, while by 1883 it had increased to \$4,600.⁹ Furthermore, in 1882 he was elected president of the Arkansas Medical Society.¹ He is said to have done more for medical legislation than any other member of the state society.¹⁰

Around 1887 a lesion appeared in Dr. Southall's mouth which proved malignant. Closing his practice in 1900, he died of the cancer July 22, 1901. After a funeral service at his home, he was entombed in the family mausoleum in Oakland Cemetery. The funeral was attended by the entire medical society.¹¹

References

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* University of Arkansas for Medical Sciences, 4301 West Markham, Little Rock, Arkansas 72205.

THINGS TO COME

OCTOBER 6-9

Comprehensive Review in Toxicology. Sponsored by the Division of Emergency Medicine, UAMS, and the Arkansas Chapter ACEP. Presented by Dr. Peter Bryson. Camelot Hotel, Little Rock. Fees vary. Twenty hours of AMA Category I and ACEP Category I credit available. For further information, contact: Division of Emergency Medicine, (501) 686-5515.

OCTOBER 7-9

AMA National Conference on Adolescent Mental Health. Topics include Adolescent Suicide, Substance Abuse, Teen Sexuality, Juvenile Courts and Mental Health, Schools and Mental Health, General Medicine and Mental Health, Runaways, AIDS, Eating Disorders, Family Violence, and Severely Mentally Ill Adolescents. Hyatt Regency Oak Brook Hotel, Oak Brook, Illinois. Fees: \$195 General; \$156 AMA Member; \$100 Student. Up to fourteen hours Category I AMA credit available. For further information, call: 1-800-621-8335.

OCTOBER 13-16

American Society of Internal Medicine 32nd Annual Meeting. Sponsored by ASIM. Marriott Marquis, Atlanta, Georgia. Fees: ASIM member, \$100; IM residents, \$25; \$175 non-ASIM members. For registration information, contact: ASIM, 1101 Vermont Avenue N.W., Suite 500, Washington, D.C., 20005; (202) 289-1700.

OCTOBER 20-22

Advanced Trauma Life Support. Sponsored by and located at the University of Kentucky, Continuing Medical Education, Lexington. Category I credit available. Further information: Joy Greene, 132 College of

Medicine Office Building, University of Kentucky, Lexington, KY 40536-0086; (606) 233-5161.

OCTOBER 30

Physician Leadership Institute. Four week course: Week 1, October 30 - November 4, 1988; Week 2, February 26 - March 3, 1989; Week 3, October 29 - November 3, 1989; Week 4, February 25 - March 1990. Sponsored by Arizona State University, Western Network for Education in Health Administration and the American Academy of Medical Directors. Tempe Mission Palms Hotel, Tempe, Arizona. Fees: Prior to October 1988, \$2,600; AAMD members are eligible for a \$200 discount. All participants are required to make a non-refundable deposit of \$300 with the application. Category I credit available on an hour-four-hour basis. For further information contact, The Western Network for Education in Health Administration; 2131 University Avenue, Suite 428; Berkeley, CA 94704; (415) 642-0790.

OCTOBER 30-NOVEMBER 4

Nineteenth Family Medicine Review - Session III. Sponsored by the University of Kentucky Continuing Medical Education. Hyatt Regency Hotel, Lexington. Category I credit available. Further information: Joy Greene, Continuing Medical Education, 132 College of Medicine Office Building, University of Kentucky, Lexington, KY 40536-0086; (606) 233-5161.

NOVEMBER 27-DECEMBER 2

Seventy-fourth Scientific Assembly and Annual Meeting of the Radiological Society of North America. Sponsored by RSNA. McCormick Place, Chicago. For further information contact, RSNA, 1415 W. 22nd Street, Tower B; Oak Brook, IL 60521; (301) 571-2670.

KEEPING UP

Cholesterol: Current Concepts for Physicians

Self-Study Course for Physicians. Sponsored by the National Health, Lung and Blood Institute. A national cholesterol education program is available through the Arkansas Medical Society office in which a physician studies at home. Two hours Category I credit. Further

information, contact AMS, 224-8967 or 1-800-542-1058.

Angina Therapy

September 27, 12:30 p.m. Presented by Charles Marsh, Pharm.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Sexual Abuse Workshop

September 27, 12:30 p.m. Presented by various speakers. Sponsored by AHEC - Fort Smith. Westark Community College. One Category I credit hour.

Childhood Immunizations

September 28, 12:30 p.m. Presented by Dr. Charles Floyd. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Geriatric Conference

September 30, 1:00 p.m. Presented by various speakers. Sponsored by AHEC - Fort Smith. Sheraton Inn Fort Smith. One Category I credit hour.

Internal Medicine Conference

October 4, 12:30 p.m. Presented by Dr. L. C. Price. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Comprehensive Review in Toxicology

October 6 - 9. Presented by Dr. Peter Bryson. Sponsored by the University of Arkansas for Medical Sciences. Camelot Hotel, Little Rock. Fees vary. Twenty Category I credit hours. Further information: Division of Emergency Medicine, (501) 686-5515.

Juvenile Rheumatoid Arthritis

October 18, 12:30 p.m. Presented by Dr. Robert Walling. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Premenstrual Syndrome

October 25, 12:30 p.m. Presented by Charles Marsh, Pharm. D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Behavioral Management of Pain

October 27, 12:30 p.m. Presented by Ron Huisman, Ph.D. Sponsored by AHEC - Fort Smith. Medical

Library, Sparks Regional Medical Center. One Category I credit hour.

Third Annual Trauma Symposium

November 5, time to be announced. Presented by Dr. John R. Cone. Sponsored by UAMS Continuing Education for Physicians. Little Rock Hilton Inn. Fees and credit hours to be announced.

Eating Disorders - Food for Thought

November 9, 12:30 p.m. Presented by Russell Williams, MSW. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Tumor Conference

November 15, 12:00 noon. Presented by Dr. Lai Bui. Sponsored by AHEC - Fort Smith. Seventh Floor Dining Room, Sparks Regional Medical Center. One Category I credit hour.

Chronic Diarrhea in Children

November 16, 12:00 noon. Presented by Dr. Kevin Donovan. Sponsored by AHEC - Fort Smith. Doctor's Conference Room, Sparks Regional Medical Center. One Category I credit hour.

Fifth Annual Conference on Perinatal Care

November 17-19, 8:00 a.m. - 5:15 p.m. Presented by Frank C. Miller, M.D., and Glenna Roberts, R.N.P. Sponsored by the UAMS Continuing Education for Physicians. Riverfront Hilton Inn, North Little Rock. Fees: Physicians, \$150 for full conference. Others, \$65 for full conference. Fee prorated for two or one-day participation.

Patient Information and Education

November 22, 12:30 p.m. Presented by Charles Marsh, Pharm.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Recurring Education Programs

As organizations accredited for continuing medical education by the Arkansas Medical Society, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), each Friday, 12:15 p.m., Conference Room, Building 1, VAMC
Mortality/Morbidity Conference, fourth Wednesday, 2:45 p.m., Conference Room, Building 1, VAMC.

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon, varying topics, alternating Fridays, 12:30 p.m., Classrooms, AMI National Park Medical Center

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Metabolic Neurology Conference, first Wednesday, 1:00 p.m., Physicians Lounge, 2nd Floor
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Second Floor Classroom
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday when applicable, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Sturgis Building, Rooms S120-121
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium
Cancer Conference, third and fourth Thursday, 12:00 noon, Room S1174K, Lab
General Medicine Journal Club, each Tuesday, 12:00 noon, Petit Jean Room
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Arkla Room
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory
Pediatric Conference, first Tuesday, 12:30 p.m., Maumelle Room
Peripheral Vascular Disease Conference, fourth Tuesday, 6:00 p.m., Arkla Room
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, Southwestern Bell/Arkla Rooms

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and case presentations
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES - LITTLE ROCK

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Conference Series, times and dates vary, UAMS Education Building, Room G/110 A&B
Anesthesia Morbidity and Mortality Conference, every second and fourth Tuesday, 6:45 a.m., UAMS Education Building, Room G/110 A&B. Every first, second and third Thursday, 4:00 p.m., Room G/112 A&B.
Child Psychiatry Clinical Case Conference, first Friday, 1:00 p.m., UAMS Child Study Center Conference Room.
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium
Medicine Research Conference, each Wednesday, 4:30 p.m. Shorey Building, Room 3506
Neurology Clinical Case Conference, three or four Thursdays per month, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.
Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (7D33) and LRVAMC (Autopsy Room).
Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7D33.
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Basic Science Conference, occasional Tuesdays, 11:00 a.m., UAMS Education Bldg., Room B/135.
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds/Clinical Case Conference, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building, Room 159
Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Morbidity and Mortality Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A.
Surgery Resident Case Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A
Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Conference, last Wednesday, 5:00 p.m., UAMS
Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS
VA Diagnostic Imaging Conference, every Tuesday, Wednesday and Thursday, 8:00 a.m., LRVA Nuclear Medicine Conference Room, Room 1D173
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., NLRVA, Building 66, Room 38

VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., NLRVA Building 89, Conference Room, or Arkansas Rehab Institute
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Surgery Service General Chest Topics (Combined Surgery/Medicine Lung Conference), every other Monday, 12:15 p.m., LRVA, Room 2D109.
VA Surgery Service Lung Cancer Conference, every Tuesday, 3:00 p.m., LRVA, Room 2E142.
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Tumor Conference, each Tuesday, 1:00 p.m., VAMC, Room 2D109

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Wamer Brown Hospital
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pediatric Conference, third Friday, 12:15 p.m., Union Medical Center.
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital
Medicine Teaching Conference, first, third and fifth Thursday, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville
Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center
St. Mary's Saturday Morning Problem Conference, each Saturday, 8:30 a.m., St. Mary's Rogers Hospital, Rogers, AR.

FORT SMITH - AHEC

Internal Medicine Conference, first Tuesday, 12:30 p.m., Medical Library, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, every four months, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, MO
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
Neuroradiology Conference, second Friday, 12:00 noon, St. Bernard's Dietary Conference Room
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Wynne Tumor Conference, third Tuesday, 6:00 p.m., Grecian Steak House, Wynne, every four months.

PINE BLUFF-AHEC

Behavioral Science Conference, first and third Thursday, 12:30 p.m., Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, first and fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Geriatrics Conference, third Friday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Orthopedic Case Conference, second and fourth Thursday, 12:30 p.m., Jefferson Regional Medical Center.
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, fourth Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Surgery Conference, first Friday, 12:30 p.m., Jefferson Regional Medical Center
Tumor Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Cardiology Conference, alternating Fridays, 11:30 a.m., St. Michael Hospital
Cinc Radiology, second Friday, 12:00 noon, Wadley Regional Medical Center.
Echo-Cardiology, fourth Friday, 12:00 noon, Wadley Regional Medical Center
Neuro-Radiology Conference, second and fourth Wednesday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Surgeons and Pathologists Conference, second Thursday, 7:00 a.m. breakfast, Wadley Regional Medical Center
AHEC Tumor Conference, first Wednesday, 7:00 a.m. breakfast, St. Michael Hospital

RE-INTRODUCE THE OLDEST ADVANCE IN MEDICINES.



It's called talking. Right or wrong, many older people today feel that doctors just don't spend as much time talking with their patients as they used to. Things seem more rushed and hurried.

But talking, especially about medicines, is more important than ever before. Your older patients may be taking several different medicines and seeing more than one doctor. And many older people are treating themselves with over-the-counter drugs.

Unfortunately, an older person's response to medicines is less predictable than a younger person's. They can experience altered drug actions and adverse drug reactions.

So, if they don't tell you first, ask them what they're taking and if the medicines are causing any problems. Take a complete medications history including both prescription and non-prescription medicines.

Make it a point to tell them what they need to know — the medicine's name, how and when to take it, precautions, and possible side effects. Give them written or printed information they can take home, and encourage them to write down what you tell them.

Good, clear communication about medicines can increase compliance, prevent problems, and lead to better health.

So re-introduce the oldest advance in medicines. Make talking a crucial part of your practice. It isn't a thing of the past. It's the way to a healthier future.

*Before they take it,
talk about it.*

✕ ✕ National Council on
✕ ✕ Patient Information and Education.
666 Eleventh St. N.W. Suite 810
Washington, D.C. 20001

AMS NEWSMAKERS

Dr. Richard McCarthy, a pediatric orthopedic specialist, has been elected secretary/treasurer of the Arkansas Children's Hospital in Little Rock.

The 1988 yearbook of Little Rock Catholic High School has been dedicated to **Jerry Thomas, M.D.**, a Little Rock orthopaedic surgeon, who has been the football team physician for the school for many years. The dedication page indicated that Dr. Thomas is "The real father of five Catholic High graduates and the honorary father of over a thousand more."

The Dermott Hospital Board of Directors and the Dermott Chamber of Commerce recently honored **Major E. Smith, M.D.** with a reception. Dr. Smith retired from his general practice in June.

John C. Smith, M.D., an Ozark surgeon, has been named chief of staff for at the Turner Memorial Hospital in Ozark.

Oliver Wallace, M.D., a family practitioner from Green Forest, has been elected president of the Arkansas Chapter of the Academy of Family Physicians. Dr. Wallace has practiced for more than 30 years in Green Forest and is a member of both the county and state medical societies.

The Arkansas Mental Health Institute recently awarded **Joe L. Martindale, M.D.** with a community service award for his work with substance abuse in Saline County. Dr. Martindale is a general practitioner in

Benton and is the chairman of the AMS Physicians' Health Committee.

Yoland M. Condrey, M.D., of Mountain Home recently attended the Women's Leadership in Pediatrics conference in Chicago. Dr. Condrey was chosen by the Arkansas Chapter of the American Academy of Pediatrics and was one of 54 delegates to attend the conference.

The Jasper Chapter of American Association of Retired Persons recently heard **Charlton Chambers, M.D.** speak about hearing loss and the problems it can cause. Dr. Chambers is a Harrison otolaryngologist.

Nita Brown Oakley, M.D., was certified recently as a fellow of the American Academy of Emergency Physicians. Dr. Oakley is the medical director of a clinic in Maumelle.

The Arkansas Chapter of the American Academy of Family Physicians named **Ed Barron, M.D.**, a physician/reporter for the Eleven Action News, as recipient of the AAFP award for outstanding service in the field of public relations. Dr. Barron practices in Little Rock.

Ralph Hamilton, M.D., was the honoree of the third annual Citizen of the Year Roast in West Memphis. The event is sponsored by the West Memphis Chamber of Commerce. Dr. Hamilton was chosen for his service of the community in his medical practice as well as his support of the high school athletic programs in that community.

NEW MEMBERS

CLARK COUNTY MEDICAL SOCIETY

Lowry, James L., General Surgery, Arkadelphia. Born December 16, 1938, Ashley County, AR. Pre-medical education, University of Arkansas, Monticello, B.S., 1960. Medical education, UAMS, 1964. Internship/residency, Confederate Memorial Med. Cntr., Shreveport, LA. Military record, U. S. Navy 1965-67. Practice experience, Allen Parish, LA, 17 years. Board certified, Surgery. Member, Shreveport Surgical Society; Surgical Association of Louisiana; ACS; SAGES.

GARLAND COUNTY MEDICAL SOCIETY

Cofer, Thomas N., Internal Medicine, Hot Springs Village. Born August 13, 1937; Carbondale, IL. Pre-medical education, University of Illinois, B.S., 1963. Medical education, University of Missouri School of Medicine, Columbia; 1967. Internship/residency, St. Francis Hospital, Peoria, IL. Military, U.S. Air Force, 1955-60. Practice experience, Chillicothe, MO, 15 years; Corry, PA, 1 year; Hot Springs Village, 1 year. Board eligible.

MILLER COUNTY MEDICAL SOCIETY

Sarrett, James J., Family Practice, Texarkana. Born June 6, 1959, Camden. Pre-medical education, Baylor University, B.S., 1980. Medical education, University of Arkansas for Medical Sciences, 1985. Internship/residency, Louisiana State University Medical Center, Shreveport. Board certified, Family Practice. Member, AMA, AAFP, Northwest Louisiana Academy of Family Physicians.

PULASKI COUNTY MEDICAL SOCIETY

Baber, William W., Radiology, Little Rock. Born April 22, 1958, Little Rock. Pre-medical education, Hendrix College, 1980. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/residency, Louisiana State University Affiliated Hospitals, New Orleans. Board certified, Radiology.

Carfagno, Jeffrey J., Family Practice, North Little Rock. Born December 10, 1958, Atkins. Pre-medical education, University of Arkansas at Fayetteville, B.S., 1981. Medical education, University of Arkansas for Medical Sciences, 1985. Internship/residency, UAMS. Board eligible.

Cathey, Steven L., Neurosurgery, North Little Rock. Born April 30, 1957, El Dorado. Pre-medical education, University of Arkansas at Monticello, B.S., 1978. Medical education, University of Arkansas for Medical Sciences, 1982. Internship, Baylor University Medical Center. Residency, UAMS. Board eligible.

Davie, Melanie H., Anesthesiology, Little Rock. Born October 19, 1956, Fayetteville. Pre-medical education, University of Arkansas at Fayetteville, B.S., 1979. Medical education, University of Arkansas for Medical Sciences, 1983. Internship/residency, UAMS. Practice experience, Little Rock, 2 years. Board certified, Anesthesiology.

Houk, Richard W., Rheumatology, Little Rock. Born November 5, 1951, Cookeville, TN. Pre-medical education, U.S.A.F. Academy, Colorado Springs, B.S., 1973. Medical education, Tulane University School of Medicine, New Orleans, 1977. Internship/residency, U.S.A.F., Lackland AFB, TX and Northwestern University, Chicago. Practice experience, Wilford Hall U.S.A.F. Medical Center. Board certified, Internal Medicine and Rheumatology. Member, Bexar County Medical Association.

Jones, Roy S., Gastroenterology, Little Rock. Born October 30, 1956, El Dorado. Pre-medical education, Hendrix College, Conway, B.A., 1979. Medical education, University of Arkansas for Medical Sciences, 1983. Internship, Louisiana State University, Shreveport. Residency, University of North Carolina, Chapel Hill. Board certified, Internal Medicine.

Kirchner, Jeffrey J., Family Practice, North Little Rock. Born July 21, 1954, Little Rock. Pre-medical

education, Christian Brothers College, Memphis, B.S., 1976. Medical education, University of Arkansas for Medical Sciences, 1985. Internship/residency, Charleston Area Medical Center, Charleston, West Virginia.

Malloy, Mark J., Internal Medicine, Little Rock. Born December 31, 1952, Crossett. Pre-medical education, University of Arkansas at Fayetteville, B.A., 1975. Medical education, University of Arkansas for Medical Sciences, 1979. Internship/residency, UAMS. Practice experience, 5 years, Stuttgart.

McDonald, Judy, Obstetrics/Gynecology, Little Rock. Born October 11, 1950, Austin, TX. Pre-medical education, University of Texas, B.S., 1971. Texas Tech University, M.S., 1977. Medical education, University of Texas, 1981. Internship/residency, University Hospital, Jackson, MS. Practice experience, 3 years, Natchez, MS. Board certified, Obstetrics and Gynecology.

Moore, Michael M., Hand and Microsurgery, Little Rock. Born October 16, 1952, San Francisco. Pre-medical education, Stanford University, Stanford, CA, B.S., 1975. Medical education, University of California, San Diego, 1979. Internship, University of Florida, Gainesville. Residency, Hand Association of Indiana, Indianapolis. Board certified, Orthopaedics.

Parmley, Tim H., Obstetrics/Gynecology. Born March 2, 1940, New Orleans. Pre-medical education, Johns Hopkins University, Baltimore, B.A., 1962. Medical education, Johns Hopkins University Medical School, 1965. Internship/residency, Johns Hopkins University. Practice experience, 14 years, Baltimore; 2 years, Little Rock. Board certified, Obstetrics and Gynecology.

Pearce, Charles E., Orthopaedic Surgery, Little Rock. Born December 27, 1956, Knoxville, TN. Pre-medical education, University of Arkansas at Fayetteville, B.A., 1979. Medical education, University of Arkansas for Medical Sciences, 1983. Internship/residency, UAMS.

Studivant, Stephen E., Pathology, Little Rock. Born February 18, 1952, Austin, TX. Pre-medical education, University of Texas, Austin, B.A., 1975. Medical education, University of Texas, San Antonio, 1986. Internship/residency, University of Texas Affiliated Hospitals. Practice experience, 3 years, Little Rock. Board certified, Pathology.

Thomas, Kathy L., Family Practice, Sherwood. Born February 18, 1958, Arkadelphia. Pre-medical education, Southern Arkansas University, Magnolia, B.S., 1980. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/residency, UAMS. Board eligible.

Wolverton, John W., Family Medicine and Geriatrics, Little Rock. Born May 30, 1953, Newark, OH. Pre-medical education Kent State University, B.A., 1975. Medical education, Ohio State University, 1978. Internship/residency, UAMS. Practice experience, 6 years, Little Rock. Board certified.

SEBASTIAN COUNTY MEDICAL SOCIETY

Landherr II, Edwin J., Neurosurgery, Fort Smith. Born August 21, 1939, Sterling, IL. Pre-medical education, Notre Dame University and the University of Iowa, 1960. Medical education, University of Illinois College of Medicine, 1964. Internship, Milwaukee County General. Residency, Marquette University. Military record, U. S. Navy, 1968-72. Practice experience, 18 years, Temple, TX. Member, Texas Society of Neurological Surgery; Congress of Neurosurgery.

Piechal, William S., Physical Medicine and Rehabilitation, Fort Smith. Born August 14, 1950, Detroit, MI.

Pre-medical education, Emory University, B.S., 1977. Medical education, Michigan State University College of Osteopathic Medicine, 1983. Internship, Flint Osteopathic Hospital, Flint, MI. Residency, Medical College of Virginia. Military record, U.S. Army. Practice experience, 1+ years Lorain, OH.

Taft, Eileen J., Internal Medicine, Fort Smith. Born March 9, 1955, Evanston, IL. Pre-medical education, University of Oklahoma, B.S., 1977. Medical education, University of Oklahoma, 1981. Internship/residency, St. Paul Hospital, Dallas, TX. Board certified, Internal Medicine.

IN MEMORIAM

DR. JAMES M. NISBETT

James M. Nisbett, M.D., a retired chief medical officer for the John L. McClellan Memorial Veterans Hospital, died Monday, August 8, 1988. He was 91.

Dr. Nisbett was a life member of the Arkansas Medical Society and the Pulaski County Medical Society. He

had been a member of the American Medical Association and had been recognized for having practice medicine for over 50 years.

Dr. Nisbett is survived by his wife, Florence F. Nisbett.

DR. A. J. THOMPSON

A. J. Thompson, M.D., a cardiologist for St. Vincent Infirmary Medical Center, died Wednesday, August 17, 1988. He was 49.

Dr. Thompson had been with St. Vincent's for 13 years and was named the Physician of the Year in 1987 by the same organization. He founded the Little Rock Cardiology Clinic in 1974 and was instrumental in the planning of the cardiac facility at St. Vincent's.

Dr. Thompson was member of the Pulaski County and the Arkansas Medical Societies and was a fellow of

the American College of Physicians. He was a fellow and Governor of the American College of Cardiology.

Survivors are his wife, Linda Martin Thompson; three daughters, Karen Keathley of West Palm Beach, Florida; and Leslie Ann Thompson and Lauren Ruth Thompson, both of Little Rock. Other survivors include his father, Audrey Thompson of Williford; his mother, Ruth Spray of Seneca, South Carolina; a sister Ruth Ann Atkins of Louisville, Kentucky; and his grandmother, Dora Thompson of Ash Flat.

*Memorials honoring Arkansas Medical Society members and their families can be made to the Medical Education Foundation for Arkansas (MEFFA),
Post Office Box 5776, Little Rock, Arkansas 72215.*

AUDREY JAMES THOMPSON, M.D.

WHEREAS, the members of the Pulaski County Medical Society are deeply saddened by the recent death of a valued member, Audrey James Thompson, M.D., and

WHEREAS, for the past thirteen years as a member of this organization he had been held in high esteem by his colleagues in the medical profession, and

WHEREAS, Dr. Thompson distinguished himself in his chosen specialty of cardiology in this county as well as throughout the State; be it therefore

RESOLVED, that we adopt this resolution as a token of our appreciation of Dr. Thompson's contributions to this Society and as an expression to his family of our deep sympathy, and

RESOLVED, that a copy of this resolution be made a part of the permanent records of this Society, and

RESOLVED, that a copy be forwarded to the *Journal of the Arkansas Medical Society* for publication.

Adopted
Executive Committee
August 17, 1988

By Direction of the Memorials Committee
John D. Pike, M.D., Chairman
Henry Hollenberg, M.D.
Robert Watson, M.D.

JOHN A. TEETER, M.D.

WHEREAS, the membership of the Pulaski County Medical Society notes with sincere sorrow the recent death of a respected colleague, John A. Teeter, M.D., and

WHEREAS, he had been a valued member of this Society for more than twenty years and had given generously of his time to various Society programs, and

WHEREAS, his devotion to the well being of his patients was widely recognized; be it therefore

RESOLVED, that we adopt this resolution and designate that it be made a part of the permanent archives of the Society, and

RESOLVED, that a copy be forwarded to Dr. Teeter's family in order to convey our heartfelt sympathy, and

RESOLVED, that a copy be made available to the *Journal of the Arkansas Medical Society* for publication.

Adopted Unanimously
Executive Committee
August 17, 1988

By Order of the Memorials Committee
John D. Pike, M.D., Chairman
Robert Watson, M.D.
Henry Hollenberg, M.D.

Update: October 1988 Physician Survey About AIDS

*J.P. Lofgren, M.D.**

In February, 1988, the AIDS Committee of the Arkansas Medical Society (AMS) conducted an anonymous survey concerning attitudes about and experiences with AIDS. Questionnaires were sent to all physicians in Arkansas: 2,473 members of the society and 1635 non-members. Of the 4,108 questionnaires sent out, 811 (20%) were returned. We appreciate all those who responded. This is a good return for this type of survey.

* Arkansas Department of Health, 4815 West Markham, Little Rock, Arkansas 72205.

Thirty-six questionnaires were from physicians living outside of Arkansas, 10 were from physicians who were retired, and 3 were from physicians in public health. The data in this article is based on the remaining 762 questionnaires.

Table 1 gives the number of responses by specialty group. Because the Society knows the specialty for members, I was able to give the percentage of the members in each specialty who responded. This may give a rough idea of how likely the results of the analyses can be generalized to all the physicians in the specialty group.

TABLE 1. Responses and percentage responses of AMS by specialty and analysis groupings.

Analysis grouping Specialty	Number	Number	% AMS members responding	Analysis grouping Specialty	Number	Number	% AMS members responding
Family Practice/GP		256	29	Neurosurgery	7		19
Emergency Medicine		26	32	Orthopedics	14		13
Internal Medicine		73	24	Plastic Surgery	6		20
Medicine subspecialties		43	12	Urology	20		30
Allergy	3		17	Other specialties		89	18
Cardiology	10		13	Anesthesiology	11		10
Endocrinology	2		0	Dermatology	10		25
Geriatrics	2		0	Otology/ENT	13		16
Gastroenterology	4		8	Ophthalmology	27		28
Hematology/Oncology	7		22	Neurology	6		6
Oncology	1		3	Occupational Medicine	1		17
Pulmonary medicine	9		23	Physical Medicine Rehab	2		17
Nephrology	4		13	Psychiatry	32		30
Rheumatology	1		9	Obstetrics/Gynecology		41	26
Pediatrics		58	24	Pathology/radiology		32	11
General Pediatrics	53		29	Pathology	10		7
Pediatric Psychiatry	1		0	Radiology	22		13
Other pediatric spec	4		9	Unknown specialty		17	
General Surgery		50	25	Medical students		11	
Surgical subspecialties		66	21				
Cardiovascular Surgery	3		6				
Colon Surgery	3		67				
				Total	762	762	

For AMS members, the response rates was 28% for primary physicians, and 16% for other physicians. Because many of the specialties had only a few responses, for the purposes of the analyses, I grouped them as shown. (If you wish to know the statistics for an individual specialty, contact me.)

Taking a sexual history is important. It can help determine a patient's risk for various diseases including AIDS. In this survey (see Table 2) 35% reported routinely taking a sexual history. This ranged from 10% for general surgeons to 44% for internists. This low percent is disturbing. However, perhaps the percentage is higher when physicians see patients in demographic groups that are at higher risk, such

as unmarried males. However, getting a sexual history only from patients in certain demographic groups is not a sure way of finding all those actually at increased risk.

Cases of AIDS are assigned to Arkansas by the CDC according to the "residence at the onset of illness suggestive of AIDS". As of the time of the survey, only 105 AIDS patients assignable to Arkansas had been reported to the Arkansas Department of Health since the discovery of AIDS in 1981. Of those responding to the survey, 383 (50%) stated that they had cared for at least one patient with AIDS. There have been 1,521 physician-patient relationships. Two reasons for the difference between this and the 105 cases officially reported are: (1) there have been a number of cases who became sick elsewhere who have been cared for in Arkansas and (2) many patients have been cared for by more than one physician. Physicians who have seen at least one patient with AIDS have seen a mean of 4 AIDS patients with a median of 2. Similar figures for internists are a mean of 5.6 and median of 3. Thus, caring for an AIDS patient is a relatively rare event though a large number of physicians have done so.

Reporting of persons who are HIV positive has only recently been required. Thus there is no accurate count of the number of persons positive for HIV. There have been about 300 persons who have been repeatedly reactive by EIA (Enzyme immunoassay) and also positive by a confirmatory test (Western blot or Immunofluorescence antibody) through testing done by the ADH.

Of those responding to the survey, 432 (57%) stated they had cared for at least one HIV-positive person. There have been an estimate 2,548 physician-HIV-positive-patient relationships. The average physician has seen an average of 3.3 HIV positive patients. For physicians seeing at least one patient, the average is 5.9 with a me-

TABLE 2. Percent positive responses by specialty

SPECIALTY	Routine sexual history	Has seen AIDS patients	Has seen HIV positive	Willing to see AIDS patients	Willing to see HIV +
Family Practice/GP	36%	45%	56%	76%	81%
Emergency Medicine	31	69	50	80	88
Internal medicine	44	70	73	89	94
Medicine subspecialties	36	70	63	86	95
Pediatrics	36	22	48	88	95
General Surgery	10	58	52	73	77
Surgical subspecialties	22	59	67	58	63
Other specialties	34	54	56	85	89
Obstetrics/Gynecology	80	17	29	49	60
Pathology/radiology	19	69	66	84	93
Unknown specialty	19	41	53	67	75
Medical students	40	36	45	82	91
Total	35%	50%	57%	77%	83%

dian of 3. Again, this is a rare patient for most physicians.

In July, 1987, survey of 2,200 members of the Arkansas Medical Society, 103 physicians (28%) of the 362 who responded stated that they would be willing to serve as a primary care physician for AIDS patients. As Table 2 shows, this has improved dramatically. Overall 77% of those who responded to the survey stated that they would be willing to care for patients with AIDS and 83% stated that they would care for patients who are HIV-positive. The rate for internists is even higher. Surgeons, who have a greater likelihood than others of exposure, are generally willing to care for these patients. In actual numbers, there are at least 573 physicians in the state who are willing to care for AIDS patients.

To explore the level of concern about false positive HIV tests, one question on the survey gave the hypothetical example of "a 50-year old woman who had received a blood transfusion in 1983" who consulted her physician on whether she should have an antibody test for HIV. Of the 727 physicians who answered the question, 31% "highly recommended that she have the test," 63% would test "if the patient wished," and only 7% would "discourage her from getting test done." The correct answer is probably the latter, though the middle answer is often how the physician would make such decisions.

Obviously the answer depends heavily on where the woman received her blood. Screening of donated blood at blood banks started in March, 1985. Of the first 149,832 donations tested by the Arkansas Red Cross, only 15 were repeatedly reactive to HIV by EIA and confirmed by Western blot¹. Thus in 1983, the probability that this lady received contaminated blood from one transfusion was probably less than 1 in 10,000.

If both the EIA and Western blot tests in a lab had a specificity of 99%, this means there is a false positive

AIDS IN ARKANSAS 1988

January 1 - August 31, 1988

Total number of cases reported		66	CASES BY AGE GROUP	
Number of deaths		19	Less than 20	1
			20 - 29	24
			30 - 39	29
			40 - 49	6
			50 - 59	2
			60 or more	4
CASES BY SEX				
Male		61		
Female		5		
CASES BY RACE				
White		51	OPPORTUNISTIC DISEASE	
Black		15	Pneumocystic Carinii	30
			Kaposi's Sarcoma	4
			Pneumocystis Carinii	
			and Kaposi's Sarcoma	2
			Other	30
CASES BY RISK GROUP				
Homosexual/Bisexual*		39		
IV Drug User		3		
Hemophiliac		1		
Transfusion		5		
Heterosexual (Contacts)		4		
NIR#		4		
* Of the 39 homosexual/bisexuals, 10 are/were IV drug users				
# No identified risk group (NIR)				

* Of the 39 homosexual/bisexuals, 10 are/were IV drug users

No identified risk group (NIR)

AIDS IN ARKANSAS 1985 - 1988

Total number of cases reported		156	CASES BY AGE GROUP	
Number of deaths		78	Less than 20	1
			20 - 29	55
			30 - 39	67
			40 - 49	22
			50 - 59	5
			60 or more	6
CASES BY SEX				
Male		146		
Female		10		
CASES BY RACE				
White		124	OPPORTUNISTIC DISEASE	
Black		32	Pneumocystic Carinii	77
			Kaposi's Sarcoma	8
			Pneumocystis Carinii	
			and Kaposi's Sarcoma	5
			Other	66
CASES BY RISK GROUP				
Homosexual/Bisexual*		94		
IV Drug User		16		
Hemophiliac		1		
Transfusion		7		
Heterosexual (Contacts)		7		
NIR#		5		
* Of the 94 homosexual/bisexuals, 26 are/were IV drug users			Source: Arkansas Department of Health.	
# No identified risk group (NIR)				

* Of the 94 homosexual/bisexuals, 26 are/were IV drug users

No identified risk group (NIR)

Source: Arkansas Department of Health.

TABLE 3. Comfort level answering questions about AIDS.

SPECIALTY	Number who Answered Question (%)	Percent response			
		Very comfortable (%)	Comfortable (%)	Don't know enough (%)	Uncomfortable (%)
Family Practice/GP	256	37	31	29	2
Emergency Medicine	26	38	42	19	0
Internal medicine	72	46	24	29	1
Medicine subspecialties	42	33	38	29	0
Pediatrics	58	38	40	22	0
General Surgery	50	18	50	28	4
Surgical subspecialties	65	23	37	38	2
Other specialties	88	35	31	31	3
Obstetrics/Gynecology	41	41	24	32	2
Pathology/radiology	30	30	40	30	0
Unknown specialty	16	44	25	31	0
Medical students	11	27	9	64	0
Total	765	35%	33%	30%	2%

result once in every 100 negative samples. The combination of the two tests would produce a false positive once in 10,000. Thus if one tested this woman and the result was positive on both tests, there would be a 50% chance that the result was false positive. This is undesirable. Since the survey, antigen tests have become available that might help resolve whether a result was truly positive. However, in all probability, it would not be worthwhile to test a person who had received only one transfusion in Arkansas, and has none of the other risk factors.

During national surveys, people are asked, "If you wanted more specific information about AIDS, where would you get it?" During the National Health Interview Survey in December, 1987², 60% stated that they would go to doctor/HMO/clinic, whereas only 18% would go to the public health department and 9% mentioned the AIDS hot line. Furthermore, when asked what one source they would most likely use, 48% stated doctor/HMO/clinic, versus only 13% for the public health de-

partment and 6% for the AIDS hot line. If patients look to their physicians to get their questions answered about AIDS, it is important that physicians be able to give those answers.

In the AMS survey, 35% stated that they were very comfortable answering questions about AIDS, 33% were comfortable, 2% were uncomfortable and 30% checked the "generally I feel I don't know quite enough" answer. Table 3 shows the percentages for each response by specialty. It is partly to help fill the knowledge gap felt by 30% of physicians that the AIDS Committee of the AMS operates.

References

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**ROSALYN P. STERLING-SCOTT, M.D.**

Assistant Professor of Surgery, UCLA School of Medicine and Drew University of Medicine and Science, Los Angeles

Associate Surgeon, Department of Cardiovascular & Thoracic Surgery, Centinela Hospital Medical Center, Los Angeles

Major, U.S. Army Reserve

EDUCATION Rensselaer Polytechnic Institute, Troy, NY, B.S. Chemistry; NYU School of Medicine, New York, M.D.

RESIDENCY Boston University School of Medicine (Cardiovascular); Saint Vincent's and St. Claire's Hospitals, New York City (General Surgery)

FELLOWSHIP First Mary A. Fraley Cardiovascular Surgical Research Fellow at the Texas Heart Institute, Houston

OUTSTANDING ACHIEVEMENTS Author of numerous articles, including "Indications for Early Bypass Grafting Following Intracoronary Streptokinase"; author of "The Female Surgeon—Dawn of a New Era," chapter in *A Century of Black Surgeons—The U.S.A.* Experience; Board of Directors, Association of Black Cardiologists; Secretary, Drew Society

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- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Cecilor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in

moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.

- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Cecilor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthritis, and frequently, fever): 1.5%.
- usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Cecilor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
 - As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
 - Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertonia, dizziness, and somnolence have been reported.
 - Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1% and, rarely, thrombocytopenia.
- Abnormalities in laboratory results of uncertain etiology**
- Slight elevations in hepatic enzymes.
 - Transient fluctuations in leukocyte count (especially in infants and children).
 - Abnormal urinalysis: elevations in BUN or serum creatinine.
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EDITORIAL

Dilemmograms

John D. Olson, M.D.*



Since one in every ten or eleven women now living will develop cancer of the breast, the medical profession is constantly seeking new methods for earlier detection of this potential deadly disease. Over 40,000 women die each year of this malignancy.

Preceding the advent of the mammogram, thermograms were first widely used and publicized but this led to very limited usefulness and the procedure is now practically of historical value only. The thermogram was not selective enough in detecting early cancer. It could detect abnormalities, most often fibrocystic disease but was very limited in being of any real practical value.

The latest state of the art procedure is the mammogram which is very widely used and also very widely publicized as a method for early detection of breast malignancy. We all know that the earlier one detects a cancer, the better are the chances for a cure. We rarely see far advanced cancer of the breast, quite possibly as a result of publicity, routine breast examinations by both the patient and the physician, and the advent of the mammogram. The mammograms are not only done in the hospital or clinic settings but also in mobile units which travel around communities and which are even advertised as being in parking lots of large stores. When such nationally-known females as Nancy Reagan come to surgery for breast cancer we see an influx of patients coming to the physician's office for examination and more frequent mammograms are ordered, sometimes even at the patient's request.

The cast of principals involved in mammographic studies include the mammographer, the patient, the physicians ordering the study, and frequently the surgeon who is called in for consultation regarding the possible need for a biopsy.

One must be fully aware of the limitations of the study. All too frequently the physician is not fully cognizant of the potential pitfalls which can ensue.

It is now recognized that there is an appreciable error in interpreting the study. It is recognized that a probable 7 - 10% of patients with a palpable carcinoma clinically are being read as normal. There are many published reports and the false negative percentages reported are undoubtedly related to the experience and skill of interpreting the study by the mammographer. Mammographic interpretation should never be the sole criteria for advising breast biopsy. All too frequently when a negative report is given, an unaware physician may tell the patient that she does not have cancer when in reality she may very well have it. A patient with a suspicious, palpable mass in the breast, particularly in the cancer age group should have biopsy regardless of the mammographic report. Each mammographic report should have printed on it the limitations of the study and that a percentage will have a false negative reading.

There probably is a tendency now among mammographers to "over-read" the study and describe so many findings that it may confuse the physician. Frequently it is stated that a biopsy is definitely indicated and this statement puts a surgeon on the spot as to whether or not biopsy is indicated. It is a surgeon's responsibility to review the mammogram itself and consult further with the radiologist as to whether or not a biopsy is warranted. The numerous reports vary considerably as to the percentage of patients with a suspicious mammogram who are actually found to have a non-palpable malignancy on biopsy. In recent studies only about 15% of patients having a suspicious mammogram are proven to have either an invasive or non-palpable carcinoma and of these early malignancies found, only a few will have positive axillary nodes. It may be necessary to re-biopsy the suspicious area if the area containing the microcalcifications were not found on the first biopsy, removed and proven by x-ray following the surgery.

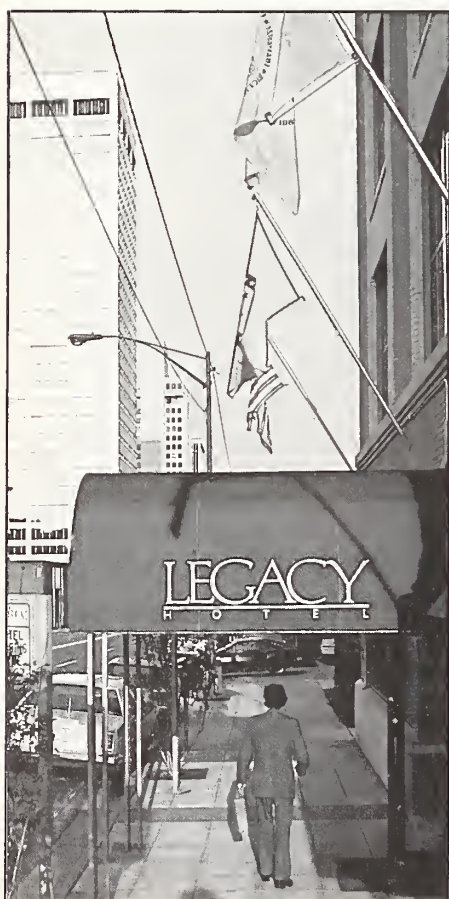
The patient herself and the family must be appraised of the findings and must be told as to what the potentialities may be. Non-palpable suspicious lesions are localized by the radiologists and biopsy is done

* Dr. Olson is a surgeon with the Holt-Krock Clinic, 1500 Dodson, Fort Smith, Arkansas 72901.

mainly in an out-patient setting, frequently under local anesthesia. Prior to the biopsy, it must be carefully explained to the patient that more definitive surgery will necessarily follow if a malignancy is found. The type of surgery will, of course, depend on the pathologist's findings and the surgeon's and patient's choice of procedure.

In conclusion, the mammogram is now the best method for finding early non-palpable malignancies of

the breast. Technique is improving and the accuracy will become greater. Like so many other technologies, it has limitations which must be recognized and appreciated. It certainly does not take the place of a careful breast examination by conscientious, experienced physicians and if a suspicious lesion is found clinically, then biopsy (frequently by the tru-cut needle in the office) can be done regardless as to what mammogram may report.



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Migraine Headaches in Children

Joseph Elser, M.D.*

Introduction

Physicians who care for children and adolescents know that headaches are a common complaint. Migraines are a frequent cause of headaches in children. This review will deal with the diagnosis and management of migraines in children.

History

There are many definitions of migraine headaches. In 1947, Vahlquist characterized migraines as "paroxysmal headaches separated by periods of freedom from pain and at least two of the following - unilateral cephalgia, nausea, visual aura, or a positive family history."¹ Gascon, in 1984, characterized migraines as "a paroxysmal disorder of cephalic arteries in which vasoconstriction is followed by vasodilatation, and is probably inherited in autosomal dominant fashion, with greater penetrance in females."² Despite differences in wording, there is general agreement that migraine headaches are vascular in nature, have symptom-free intervals, and are associated with a strong family history of headaches.

Hippocrates (460-377 B.C.) described a syndrome of periodic headaches associated with visual disturbance and vomiting. He termed this syndrome "hemicrania."³ Aretaeus of Cappadocia, a Greek physician practicing in Rome in the Second Century A.D., is generally regarded as the first to recognize migraine because of his clear description of the disorder. He reported "heterocrania," a paroxysmal headache disorder that occurred on one side of the head and then the other, recurred at regular intervals, was associated with vomiting and photophobia, and was eased by dark surroundings.⁴ Fifty years later, Galen re-introduced the term "hemicrania," which the

Romans translated into Latin as "hemicranium," and later into the low Latin "hemigranea" and "migranea." The French translation, migraine, gained acceptance in the 18th century and prevailed.

In 1962, Bille published a study of 9,000 Swedish school children, in which he found that by age 7, 40% had experienced some form of headache. By age 15 years, 75% had experienced headaches. Using Vahlquist's definition of migraine, Bille classified 4% of these headaches as migrainous in nature.⁵

Egermark and Erikson in 1982 confirmed Bille's earlier study. In 402 Swedish school children, ages 7, 11, and 15 years, it was found that headaches increased with age. Sex differences were found in older children (females having more headaches than males), while no significant sex difference was found in those 7 years of age or younger. In fact, it has been shown that in children under 10 years of age with headaches, males have more migraines than females.⁶

Classification of Migraines

The Committee on the Classification of Headache in 1962 subdivided migraine into classic migraine, common migraine, and migraine variants or complicated migraine syndromes.

Classic migraine is the headache most people typically think of as migraines. It consists of visual aura, progresses to hemicranial headache with nausea and/or vomiting, and is followed by sleepiness. The visual aura usually are scintillating scotomata or "fortification spectras." Classic migraine is common in adolescents, and is reported less often in preadolescent children.

Common migraine is seen most often in preadolescents. With common migraine the child usually does not complain of early focal neurological symptoms, the headache is usually bilateral and frontotemporal or bifrontal,

* Arkansas Children's Hospital, 800 Marshall Street, Little Rock, Arkansas 72202-3591.

is not always associated with nausea and vomiting, and is usually followed by lethargy or sleep. The younger the child, the briefer the attack.

Complicated migraine syndromes are seen more commonly in children and adolescents than in adults. They are essentially focal neurological expressions of the vasoconstrictive phase, or of sequelae resulting from vasoconstriction, such as regional ischemia or edema. The headache phase can be mild or absent. Some of the more common complicated migraine syndromes include basilar artery migraines, confusional migraine, hemiplegic migraine, and ophthalmoplegic migraine.

Basilar artery migraine is manifested by symptoms of vertebro-basilar insufficiency, such as vertigo, ataxia, diplopia, dysarthria, transient hemianopsia, and even loss of consciousness. These are most commonly seen in adolescent females. A common expression in early school age children is bisensory symptoms such as perioral and bimanual paresthesias, which may be combined with vertigo.

Confusional migraine presents as an acute confusional state and must be differentiated from acute toxic encephalopathies, psychotic states, and nonconvulsive status epilepticus. There is usually complete or partial amnesia of the event. Symptoms are explainable by ischemia or edema within the distribution of the posterior cerebral arteries to the medial temporal lobes. This syndrome is seen most often in children.

Hemiplegic migraine may present not only with an initial phase of weakness, but also hemisensory symptoms. Weakness may persist after the headache ceases. It is more concerning when the hemiplegia is on the same side with each attack and persistently outlasts the headache, especially with a negative family history or past history of migraine.

Ophthalmoplegic migraine is a rare syndrome usually seen in young children. The presumed pathophysiology is edema of the carotid artery and compression of the oculomotor nerve, resulting in third nerve palsy. Usually the infants have had a period of excessive irritability with vomiting. A Circle of Willis aneurysm must be considered with the first attack.

Diagnosis

Correct diagnosis of migraine headache or migraine syndrome can be made on the first visit in 80 - 90% of children with a careful history and the presence of a normal physical exam, including a thorough neurologic exam. The most valuable tool in the diagnosis is a good history. Migraine is a clinical diagnosis. Points in the history that should be emphasized include:

Evaluation of the temporal profile. Evaluation of the temporal profile should include the pattern of the beginning and cessation of attacks. Migraine headaches have recurring episodes of pain followed by various periods of

pain-free intervals as opposed to pain from increased intracranial pressure which causes a more constant, low grade pain.

Laterality of the headache should be elicited. Are the headaches bilateral or unilateral from the onset, or do they begin unilaterally and then generalize to become bilateral? Unilateral headaches are seen more with classic migraine, whereas bilateral headaches are more indicative of common migraine. If the headache is persistently lateralized to the same side, the possibility of a space occupying lesion should be considered. Alternating unilaterality is seen in many migraines.

Location of the headache should be determined. Common migraine is usually across the forehead or bifrontal. Classic migraine is usually frontotemporal. Muscle contraction headaches may be bifrontal, bioccipital or located at the vertex. Occipital headaches should suggest basilar artery migraine. Facial pain is usually due to sinus disease, dental problems or temporo-mandibular joint abnormalities. Retro-orbital pain is common with cluster headaches and ophthalmoplegic migraines.

Nausea and vomiting in the absence of signs and symptoms of increase intracranial pressure (ICP) with headache suggests migraine. Nausea may not be a persistent complaint with common migraine. Motion sickness is a frequent complaint of young children with migraine.

Headaches that occur on awakening, in the absence of hypertension or increased ICP are most commonly due to migraines. Onset in the afternoon on school days is also very common in children with migraine.

Relief by sleep is very typical for migraine. Mild analgesics may also afford relief. Headaches don't have to be severe to be migraine, especially in a young child who may not be the best historian.

Behavioral changes. An important and often overlooked symptom of headache in children (especially the young child) is the onset of behavioral changes. A change in emotion, cognition, or learning should be sought.

Family history. The most important point in the history when trying to determine if a child suffers from migraines is the presence of migraine or "sick headaches" in family members. By asking "Who in the family has headaches?" one will elicit a more positive response than "Are there any family members with migraine headaches?" Seventy-five to 95% of children who suffer from migraine have a positive family history for headache.⁷ Many patients will attribute headaches to sinus disease, nerves, or high blood pressure. On close questioning, however, one can usually obtain a history compatible with migraines. A positive family history is extremely helpful in the diagnosis of childhood migraine.

The quality of the pain in a patient with headache is useful. Throbbing, pulsatile headaches are common in migraines, as compared to muscle contraction headaches, which are steady and bandlike.

Other points in the history. Other points in the history that may raise suspicion of a headache disorder are sleep disturbances (bedwetting, nightmares), motion sickness, or periods of dizziness not associated with a headache.

As important as the history is in determining the presence of migraines, there are some points that are *not* compatible with migraines. One must consider another diagnosis if the following points are obtained:

- A headache that is increasing in frequency and severity, even in the presence of a past history of migraine.
- A patient with both migraine type periodic headaches and a seizure disorder.
- Some patients with complicated migraine syndromes.
- A change in the severity of pain on coughing, straining or change in body position is not typical of migraine.

Once a good history is obtained, a thorough physical exam should be done. A blood pressure reading should be obtained at each visit. Close examination of the skin for neurocutaneous lesions is important. Auscultation of the head and neck for bruits, as well as percussion of the maxillary and frontal sinuses should be part of a thorough head and neck exam. A careful and complete neurologic exam is most important since abnormal signs are present in 85% of brain tumors at presentation or within 2 months of onset.⁷ A completely normal examination will reinforce the diagnosis of migraine.

Laboratory studies in the workup of migraine are usually not needed. They are used when a careful history and physical exam demonstrates some abnormality not consistent with the diagnosis of migraine headache. Migraine is a clinical diagnosis, and laboratory studies are used to exclude more serious causes of headaches, not to confirm the diagnosis of migraine:

- Skull films are rarely indicated but may be useful after head trauma.
- Cervical spine films are useful with neck and occipital pain in an attempt to define vertebral anomalies.
- Lumbar puncture is used to exclude suspected CNS infection or increased pressure secondary to pseudotumor cerebri.
- CT scan is always indicated for any headache with focal findings on neurologic exam. Headaches that change in frequency or severity also may warrant CT scanning.
- EEG is rarely used but may be helpful if a headache syndrome is felt to be ictal.

- Arteriography may be useful if the possibility of an inflammatory or other structural vascular lesion is suspected.

Therapy Modalities

Therapy in migraine is diversified, and includes both pharmacologic and nonpharmacologic modalities. Reassurance to the parents as well as parent/patient education are the two most important aspects of initial therapy. Parents and their children must realize that headache is common in children. With a history compatible with migraine, a positive family history of headache, and a normal neurologic exam, parents should be told that no further testing may be needed. The parents and the child also must realize that migraine is a lifelong condition. While the burden of migraine can be eased, there is no way to completely cure a person from migraine attacks. The parents must also realize that the headache must not be used for secondary gain, i.e., missing school, not doing homework, not doing housework, etc.

Nonpharmacologic measures are generally aimed at avoiding the "triggers" of migraine headache. One must establish good general health habits, avoidance of stress, and avoidance of some food types (cheese, chocolate, monosodium glutamate, alcohol) that may bring on a migraine. Hypnosis, behavior modification, and biofeedback have been used extensively in adults with varying degrees of success. These modalities of therapy are not currently utilized much in children, but are probably an avenue that should be explored.

Symptomatic Therapy

When nonpharmacologic measures fail, a stepwise pharmacologic approach is instituted. Symptomatic therapy with common analgesics is initially begun, followed by abortive therapy, and finally prophylactic therapy.

Symptomatic therapy is useful for mild headaches which are infrequent with few symptoms. Aspirin, acetaminophen, and nonsteroidal antiinflammatory medicines comprise this form of therapy, usually along with a brief period of sleep. Aspirin should be used with caution in the presence of varicella or influenza A infections.

Abortive Therapy

If symptomatic therapy fails, then abortive-type medications are considered. Usually the headaches are severe enough that the patient desires relief and has tried the simple medications. However, these medications are most effective when given early on, such as during the aura. Since many children are not aware of the aura or are too young to describe it, abortive drugs may not be useful in the common childhood migraine. However, in the older adolescent who experiences an aura, this type of medication may be most effective when taken on a prn basis. Midrin® and Fiorinal® are the two most widely prescribed drugs in this category in children.

Midrin® is an agent comprised of acetaminophen, isometheptene, and dichlorophenazone. Isometheptene is a sympathomimetic amine which acts by constricting dilated cranial and cerebral arterioles. It is similar in action to the ergots but is less toxic. Midrin® also contains dichlorophenazone, which is a mild sedative. Dosage is 1-2 capsules initially, then one every hour, up to 6 per day, until the headache is relieved. It is relatively inexpensive, and its chief side effect is mild sedation.

Fiorinal® is a compound which consists of butalbital, caffeine, and aspirin. It may be prescribed with or without codeine. Butalbital is an anxiolytic and muscle relaxant. Caffeine is a fairly effective vasoconstrictor. Side effects include drowsiness, dizziness, and nausea. One to two capsules are given every four hours as needed. Due to aspirin content, Fiorinal® must be used with caution during influenza epidemics or chicken pox exposure.

The most widely used abortive drug in adults is ergotamine. Numerous preparations are available which may be administered orally, sublingually, rectally, IM, or by inhalation. The ergots are poorly absorbed by the GI tract, and thus the sublingual form is preferred. The ergots are alpha adrenergic agents with direct effect on vascular smooth muscle. When caffeine is combined with ergot there appears to be better absorption. The combination drug Cafergot is available, and one tablet taken at the onset of headache and repeated in 30 minutes is often successful. Excessive use of ergots may lead to extracranial ischemic complications, but these are rare. This medication is rarely used in children.

Abortive therapy in a young child is not always practical. The child must have access to the medication quickly, in the so-called "pre-headache" phase. Older children do better with abortive therapy than the younger child.

Prophylactic Therapy

There is no standard guideline as to when to use prophylactic therapy. It should be considered when abortive therapy fails, the child has 6-8 disabling headaches a month, or there is a disruption of lifestyle (school, social activities, etc.) Antiepileptic drugs (phenobarbital and phenytoin), beta blockers, tricyclics (amitriptyline, imipramine), and cyproheptadine are the most commonly used prophylactic drugs in children.

Antiepileptics. Phenobarbital and phenytoin have been used extensively in the past, especially in pre-adolescent children, in the prophylaxis of migraine. The exact mechanism of action is unknown, and there does not appear to be a clear advantage over other types of therapy. Dosage is similar to that used for seizure control.

Cyproheptadine. Periactin is a medication occasionally used. It must be given frequently (3-4 times a day) to be effective, thus decreasing compliance. It can be sedating and may increase the patient's appetite.

Beta Blockers. These drugs are often used in the prophylaxis of migraines. They have a number of actions, including preventing arterial dilatation, decreasing platelet cohesion, and releasing serotonin. In young children the starting dose is 10 mg orally twice a day and titrating the drug to effect. Adolescents may start with 20 mg orally twice a day. The new long acting forms are a convenient way to administer the beta blockers on a once a day basis. Contraindications to the use of propranolol are children with asthma, heart disease, or diabetes mellitus. Side effects can be prohibitive, including lethargy, malaise, dizziness, and even psychosis.

Tricyclics. Amitriptyline and imipramine are effective prophylactic medications. They appear to have an effect on vascular headaches independent of their antidepressant action. Their mechanism of action appears to be in their ability to block the re-uptake of serotonin.⁸ The usual starting dose in any age child is 25 mg orally at bed time. Side effects include dry mouth and transient daytime sedation. At low doses the side effects are uncommon. As with other prophylactic drugs, the medication is given for a 3-6 month period, at which time it is weaned. Approximately 50-60% of patients will require resumption therapy at some point.

Conclusion

The diagnosis of migraine headache is a clinical diagnosis. A high index of suspicion is important, especially when attempting to diagnose migraine in the young child. The family history of headache is extremely important, as well as the presence of a normal neurologic exam. Medications used in the treatment of migraines are varied and effective. The prognosis for children who suffer from migraine is good. The majority of children experience fewer attacks as they grow older and, in a few, migraines disappear completely.

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Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

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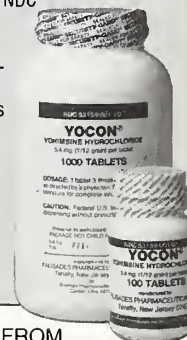
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon[®] 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

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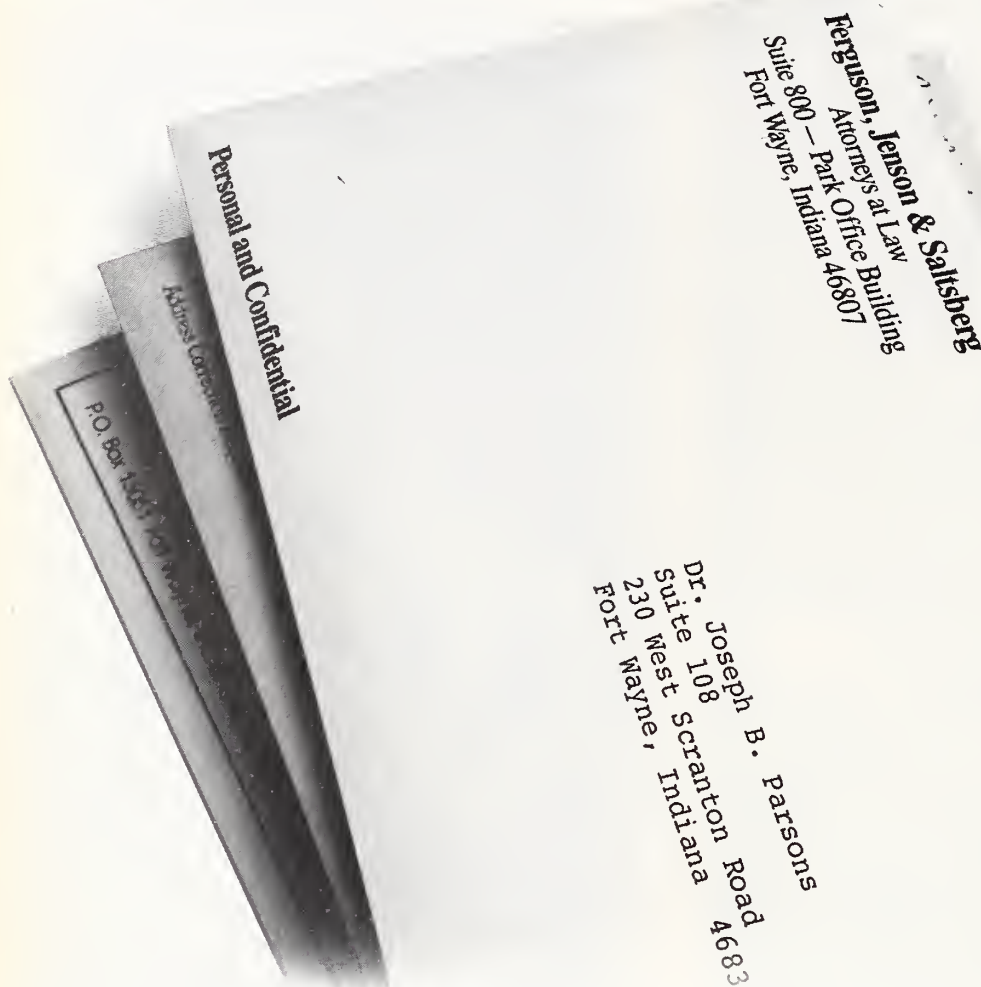
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A Team Effort

Tom Williams, Ed.D.*

I recently had the honor of being selected as the recipient of the 1988 Shuffield Award. This honor would have been difficult, if not impossible, without the development of the Fayetteville High School Health Education - Exercise Physiology Programs and the local medical community support.

The purpose of this article is to document how our medical community has accepted some responsibility for promoting health in our school district and to encourage other physicians to duplicate these programs in their own school districts.

Fayetteville High School Health Education - Exercise Physiology programs have been in existence for many years, but a progressive comprehensive health program was implemented in August 1983 and has increased in program development since that time. This program is based on a multidimensional approach to wellness and positive behavioral change. The major goal of the program is to establish healthy behavioral changes for the development of a well-balanced person and to have the student appreciate the importance of preventative behaviors.

A wide variety of innovative teaching techniques and instructional materials are used in these programs. Teaching, projects, support groups, and clubs are based on a multidimensional approach to wellness. Described in this article are some projects which were implemented through the health education program to promote learning.

Through the medical community, business support, grants, fund-raising events and donations, the following equipment was obtained: McLevy Treadmill with per-

cent grade and speed variations, Hewlett Packard 1511B electrocardiograph, Bausch and Lomb Spectronic 20, triac centrifuge, refractometer, water bath, skyndex, blood pressure kits, a Stead-Wells and Breon Spirometer, Accu-check blood glucose monitor, HPR-100 (a micro-processor to measure total strength), gonimeters, dynamometer, heart rate monitors, a Monarch 818 testing ergometer and a four panel x-ray view box (Figure 1.)

With the purchase of this equipment, a health and fitness club was implemented. Any student, faculty or family member could join. In doing so, he or she would be entitled to have a battery of health-fitness tests done

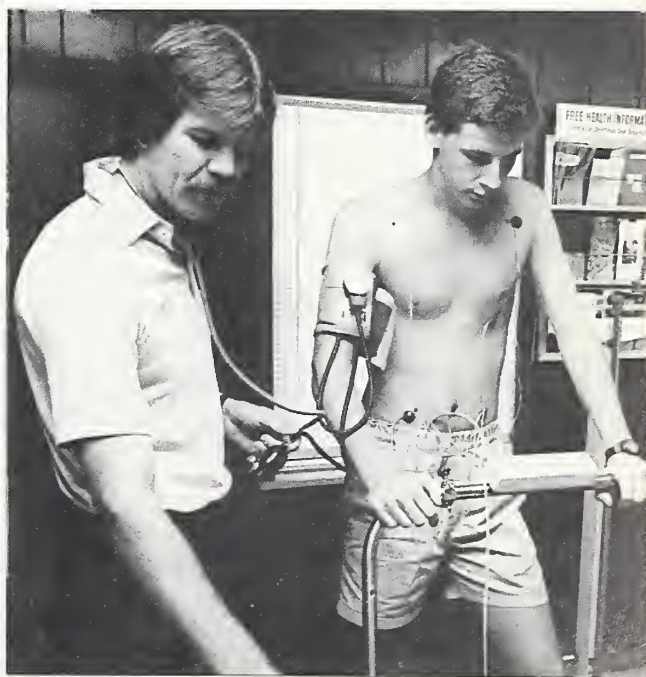


Figure 1. Dr. Williams performs a sub-maximal stress test on a student in Exercise Physiology class.

* Fayetteville Senior High Health Education, 1001 West Stone Street, Fayetteville, Arkansas 71701.

throughout the school year. The different types of tests that students learn how to administer and interpret are as follows:

Sub-Maximal Cardiovascular Stress Test. (Balke-Ware or Bruce Protocol) with 5 lead EKG. This may be done either on the treadmill or ergometer. Students interpret the ECG strip and predict aerobic capacity from heart rate (Figure 1).

Percentage Body Fat utilizing the skyndex with either Durin or Sloan formula to estimate body fat from skin-fold measurements.

Pulmonary Function (FVC, FEV [timed]). Normative values (Kory) are established for age, sex, and height to determine percent predicted.

Flexibility-Strength Index. Wells sit-stand reach protocol is used to determine flexibility. The HPR-100 is used to measure a total strength index.

Blood Chemistry. Total cholesterol, protein, glucose, hematocrit, hemoglobin. Students perform manual procedures to determine blood profiles (Figure 2).

Nutritional Analysis utilizing the DINE microcomputer software program.

Community physicians are utilized to further enhance subject materials and augment learning experiences with these instruments. Their expertise are utilized to help explain results or provide assistance in the needed protocols.

Other physicians allow field trips to their office or hospital to demonstrate their particular field. One local physician takes the students to pathology at Washington Regional Medical Center and displays specific anatomy of the human body. He points out the diseased organ and how preventive measures could have reduced the prevalence of that specific disease. Another physician donates old x-rays for further enhancement of health-science education. Those students who want to increase their knowledge with radiology are allowed to visit with the physician during x-ray procedures. Many physicians donate their medical journals or publications in various fields. We have started a library with these publications with a current topic index. This is a valuable resource for the students' research projects. When students choose a particular research project, physicians have allowed the students to use their instruments for testing or contact patients for the sample population.

Antaeus Research Institute-ANL Laboratory has been helpful in our organization of the blood chemistry profiles. They have conducted comparison tests on our blood assays and offered technical assistance when needed.

A local cardiovascular surgeon lets our program borrow several models of pacemakers to augment our unit on cardiovascular diseases. He also supplied many research articles supporting preventative habits to reduce



Figure 2. Student performing blood test for cholesterol counts.

the occurrence of cardiovascular disease and the importance of stress testing.

The results of these programs have been impressive. To date over 250 students and faculty have participated in the health-fitness evaluations and improved many parameters of their health. This program has been selected as one of the top 20 Health Education programs for public schools in the United States, and was awarded the Governor's Award for Health Education and Promotion (1985).

The Arkansas Department of Health selected this program as one of the top five community health projects to represent Arkansas for the Secretary's Health Education Award (1986), and it was selected as an Award Winner for an Alcohol-Drug Prevention Program (1986) by the United States Department of Human Services. In 1987, a student in this program was selected by the National Institutes of Health as the Outstanding Junior researcher for the State of Arkansas.

This summer was the first year for the Fayetteville High Health-Science Enrichment Program, AEGIS 1988. This two-week program was designed for students who envision themselves entering the health-medical profession. The students received hands-on experience and conducted research projects using various forms of diagnostic testing equipment. Several physicians, committed to assisting in this endeavor, lectured or demonstrated their particular field of practice.

I applaud the medical community in our school district for taking part of the responsibility to promote proper health habits and teach career opportunities. Their contributions to instill positive health habits among our students have been far above reproach. I would also like to encourage other physicians to solicit support from their local school districts to take on some of the responsibility to promote health-science among our youth.

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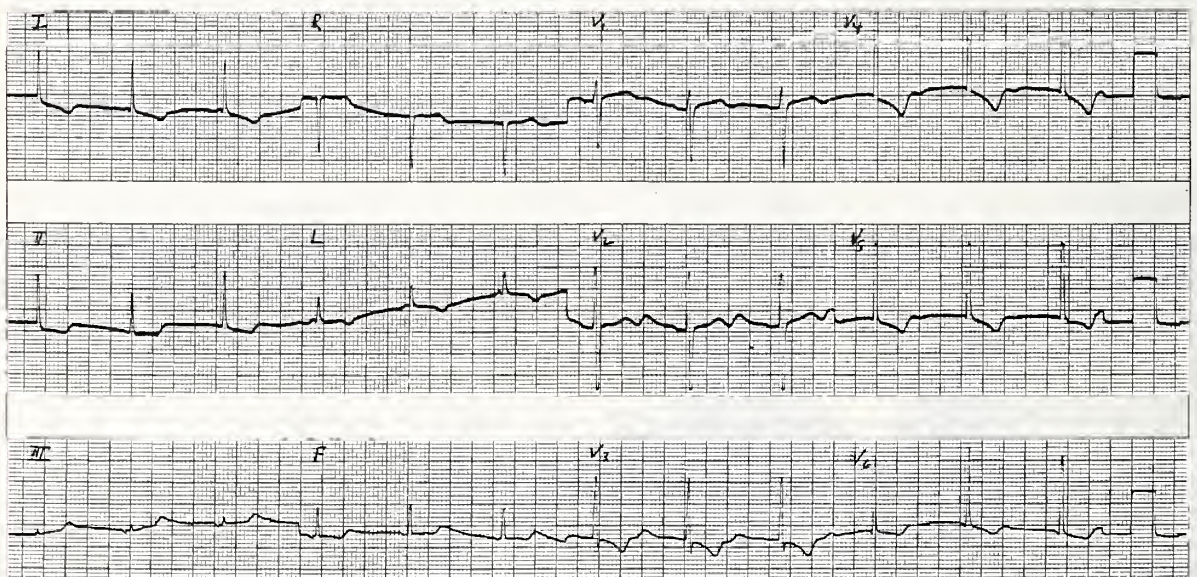
Karen Cannella, M.D.
John W. Watson, M.D.
UAMS Division of Cardiology
Little Rock, Arkansas

CLINICAL HISTORY:

P. K. is a 52-year-old man with a two-week history of weakness and muscle cramps. He takes Lanoxin for "supraventricular arrhythmia" and Lasix for "edema." He takes no potassium supplementation. His ECG is shown. What do you think?

DISCUSSION:

The mechanism is junctional or perhaps atrial. The P-waves almost override the QRS and the PR interval is very short. U-waves are noted prominently in the precordial leads. ST-T changes of nonspecific type are present. These changes in the electrocardiogram are compatible with hypokalemia and digoxin excess.



Early Identification and Habilitation Services

Vikki A. Stefans, M.D.*

In medicine we have long been concerned that the "success" of the neonatal intensive care unit could result in a drastic increase in the numbers and proportion of very premature infants surviving with extreme handicaps. In fact, the percentage of children with mental retardation and cerebral palsy may have changed little.

A study in Paris on 286 premature infants born prior to 1962 showed that at high school entry, 6.5% had cerebral palsy and 8% had mental retardation. A mortality rate of 90% was recorded for infants weighing 50-100 grams at birth during that time.

In our era, at least 60% of infants weighing 500-1000 grams and 90% of infants under 1500 grams survive. Case Western University reported a mean IQ of 92 on 505 graduates of Rainbow Babies neonatal intensive care unit, with cerebral palsy found in 5.4% of the children. Seven and one-half percent had low developmental quotients at 33 months of age. Minor neurosensory abnormalities were noted in 21% of the Paris group and 20% of the Rainbow Babies group.¹

Nevertheless, these data indicate we are dealing with infants at risk. The incidence of cerebral palsy in the general population is 0.1-0.2%² and it is estimated that 25% of all cerebral palsy may be attributable to prematurity and its complications. For the vast majority of these children, early assessment and intervention studies show several pertinent concepts:

Correlation between IQ and socioeconomic status is a consistent finding and is more marked for the most vulnerable children. The lower the birth weight, the greater the impact of adverse environmental factors on developmental outcome.

There should be an ongoing interaction between the child and the parents. This should be a focus of assess-

ment and intervention. Mutual adaptability may be predictive of a good outcome. Involved parents respond appropriately in terms of being more stimulating or more controlling of their premature infants as they develop when compared to normals.

Problems such as length of initial hospitalization, re-hospitalization (according to one study, 8% of infants over 2500 grams versus 38.2% of infants under 1500 grams were re-hospitalized in the first several months of life), difficult behavior, physical appearance, and multiple medical problems can be obstacles to the good interaction desired.

The early intervention programs most likely to be effective are those that start in the first year of life, focus on the interaction between child and parent, and include attention to environmental factors. Such programs promote a safe, structured, stimulating environment. Visits to the home and a structured curriculum are strong, positive factors in an intervention program.

Studies out of Chapel Hill, NC, and the Abecedarian Project have shown improved IQs at age 4, and 50% fewer special education placements or repeated grades.¹ At Arkansas Children's Hospital, Dr. Patrick Casey is working on a 5-year follow-up study in the Infant Health and Development Program. Dr. Diane Edwards is collecting data on the moderate and high risk newborn clinic with testing of neurodevelopmental and sensory functioning.³

Criteria for moderate risk are less than 1500 gram birthweight or 30 week gestation, or grade 1-2 intraventricular hemorrhage. For high risk, the criteria are less than 1000 grams or a higher grade of hemorrhage.

About 9% of these infants have moderate to severe handicaps including cerebral palsy, marked developmental delay, or severe visual impairment. It should be noted that testing with Gesell, Bayley, or similar scales, and not screening with the Denver Developmental, is needed for these children. Screening is designed and indicated for

* Arkansas Children's Hospital, 800 Marshall Street, Little Rock, Arkansas 72202.

the general population - it is not sensitive enough for prematures at corrected age; false positives can be produced for prematures if the uncorrected age is used. Screening of all children remains critical. Twenty-five percent of cerebral palsy occurs with known risk factors; 75% occurs in children without any such "red flag."

Between 9-10% of all pre-school blindness is attributable to retinopathy of prematurity or cortical visual deficit related to other complications of prematurity such as intraventricular hemorrhage or other brain damage. Again, these children are tested by an ophthalmologist for retinopathy and may receive auditory and visual evoked responses, rather than relying on routine in-office screening that is needed for all children.

It is known that some children with early motor abnormalities will eventually have resolution of these problems, and although they are more likely to be affected later by learning disabilities, they will no longer warrant a diagnosis of cerebral palsy.⁴ However, it appears that even with the best of obstetrical and perinatal care (and perhaps even the most effective early intervention), there will still be an incidence of physical and developmental handicap that cannot be prevented primarily.

There are even fewer good "efficacy studies" of what does and does not benefit this group of children than there are for the children at risk. However, there are some excellent studies in progress and whose findings should be released soon. For example, at the recent American Academy of Cerebral Palsy and Developmental Medicine meeting in Boston, a Canadian group presented a design for evaluating the effect of inhibitive casting with intensive neurodevelopmental therapy on children with cerebral palsy. Also, Dr. Frederick Palmer will soon be publishing results of a three-year study of the effects of physical therapy on spastic diplegia.

Early identification is not the end point or goal of early assessment and screening. It must be a prelude to intervention. A group studying children in Colorado found that without intervention 100% of "identified" children at age 5 needed special education services. With intervention, 33% did not need it; resulting in a three-year cost savings of \$1,500 per child.⁵ One way to look at rehabilitation services is to describe that an intervention aimed at "the restoration through personal health services of handicapped individuals to the fullest physical, mental, social, and economic usefulness of which they are capable, including ordinary treatment and treatment in special rehabilitation centers."⁶ In pediatrics, and in particular for children with cerebral palsy and other congenital handicaps, we are not restoring lost abilities but trying to foster the development of abilities that come naturally to the "normal" child without any extraordinary efforts. Therefore, the correct word may be "habilitation," rather than "rehabilitation." And the impact of an impairment or handicap on a child's growth and development is the distinguishing focus of pediatric habilitation.

Although cerebral palsy is defined as a non-progressive disorder of movement and posture due to impairment of brain functioning and originating in the developmental period, the prevention of orthopedic complications is essential to preventing secondary disability and progressive loss of function.⁷ There are many different ways of doing this. Traditionally, the means was physical therapy, orthotics, surgery, or some combination of the three. On the horizon is neurosurgical treatment in the form of highly selective posterior rhizotomy, of which a few preliminary studies look promising for improved function in ambulation. Major areas of focus are hips, spine, and lower extremities. Upper extremities also should not be neglected.

At the hip, the excessive pull of flexors and adductors tends to produce subluxation and a lack of good weightbearing through the femoral head compounds the problem by leading to acetabular dysplasia. This problem can progress fairly quickly, requiring exam and x-ray follow-up every four to six months for any hip showing less than 45° abduction, any asymmetry or other clinical finding suggestive of subluxation. For example, a femoral leg length discrepancy (Galeazzi sign) or just a feeling of instability on circumduction of the hip, could be indication for radiologic evaluation. Early detection and treatment means muscle releases alone may suffice, but delay leads to the need for femoral or even pelvic osteotomies. Surgery, of course, poses a higher risk of post-operative stiffness and impaired mobility. Hip extension contractures, which may occur after more extensive surgeries, are functionally more severe problems than flexion contractures because they make appropriate seating nearly impossible. Bleck's test of the basics of orthopedic management of cerebral palsy is an excellent reference in this area.⁸

Scoliosis may or may not prove to be progressive. In general, curves of more than 45°-50° have the potential to progress even after bony maturity. Curves of 60° or more adversely affect cardiorespiratory functions.

Treatment with a body jacket (when necessary), and spinal fusion (before a curve becomes inoperable and/or pulmonary function and sitting ability become impaired), can greatly enhance the quality of life for even the severely handicapped child. Most sources indicate that wheelchair modification alone cannot prevent progressive scoliosis but it seems likely that poor seating can aggravate it. At the Conway Human Development Center there is a superb custom seating program where there is essentially 100% cooperation with the use of seating devices. Improvement of scoliosis has been seen in a few cases and progression has appeared to be minimized.

Other lower extremity problems commonly seen are equinovarus, tight hamstrings, and rotational problems which can be evaluated with standard physical examination techniques and treated with range of motion exercises, orthotics, twister cables in the smaller child (at

least for improved functional ambulation), motor point or nerve blocks, or surgery. In general, rigid deformities require consideration for surgery if the results of surgery are likely to improve function in a significant way.

Orthotic treatment and gait analysis are gradually becoming more scientific. There is no longer a "CP brace" or a "spina bifida brace." Each child's situation is analyzed individually. A common pitfall is relying on special shoes to correct foot deformities. X-ray studies have demonstrated that actual foot position is often unchanged although external appearance is deceptively normalized. Plastic orthotics have an advantage of better varus-valgus control, use with "normal" inexpensive shoes, and lighter weight. Their major disadvantage is the extra expense and time involved in custom fitting and adjustments. Children generally cannot use "off the shelf" models, and may outgrow orthotics as quickly as every six months. Until recently, plastic orthotics were also less adjustable and durable, in particular for heavy users with a great deal of spasticity. Modifications such as a plastic hinge joint allowing dorsiflexion and stopping plantarflexion, graphite reinforcements, and incorporation of tone-inhibiting features have been developed and are very helpful in selected cases.

Inhibitive casting, a casting at approximately 90° with a special foot plate designed to reduce abnormal tone by relieving metatarsal heads and elevating lateral toes, may also reduce abnormal tone and has been shown to improve gait patterns. Its effects will "wear off" several weeks after the casting is discontinued. Obviously, we are not curing cerebral palsy by treating the peripheral neuromuscular skeletal system. However, if the design is effective its features can be partially incorporated into orthotics for long-term maintenance. More research is needed in this area as well.

Most centers simply analyze gait by observing it due to the expense and special expertise required for a gait lab. For research purposes and ideally before sophisticated surgery designed to improve gait, the gait lab with surface electromyography offers detailed objective information about which muscles are functionally abnormally and producing the function problems. The traditional physical examination "tests" in the static situation do not necessarily correlate with what is seen on dynamic analysis of ambulation.

Prediction of ambulatory function is also a difficult area. In general, a child with an obligatory asymmetric tonic neck reflex at any age, multiple persistent primitive reflexes beyond age two or three, or lack of independent sitting balance by age 4 will not walk independently. Seating then becomes critically important to promote good function and posture. The sling seat, so commonly seen on folding wheelchairs, aggravates internal rotation and adduction and is a very unstable base so that arm function cannot be freed up from maintaining postural security. A few basic important principles of seating are:

1. Obtain as close to 90° of flexion at hips, knees, and ankles to reduce overall extensor tone and thrust.
2. Good pelvic positioning is the cornerstone of good seating. Use a solid seat and a lap belt separate from the trunk supports at 45° to the pelvic to limit pelvic obliquity, anterior or posterior tilt, and instability.
3. Proximal stability promotes distal function. Speech and feeding as well as upper extremity function have been shown to improve with good seating.
4. Asymmetrical fixed deformities may require customized, contoured designs, either carved or molded. In general, a child should be provided with enough support to allow appropriate developmental functioning and good posture, but no more.

Other functional considerations in cerebral palsy include attention to self-help skills. Most children will have acquired the skills they will have as adults by age 6 and normalized disciplinary expectations and family responsibilities. Excessive dependency fostered by either pity, habit, or convenience is common, but one factor found to discriminate between handicapped people with and without a satisfactory vocational and social adjustment in the long term was a regular family "chore" assigned to them by the sixth grade.⁹ The hemiplegic child will need attention to upper function on the involved side because the full potential for function may not develop spontaneously. Sensory as well as motor function is important in prognosis for ultimate functional use and setting reasonable therapeutic goals. Occupational therapists in particular can help in this kind of assessment and treatment.

Special technologies such as electric mobility or augmentative communication are needed for some children, including those with cerebral palsy or spinal cord injury and can allow for their full developmental potential in language or mobility. Children three-years-old (and perhaps younger) may be able to use electric mobility. They need not have normal vision or cognitive function in order to do so. Their psychologic state and spatial perceptual development may be greatly enhanced.¹⁰ Simple switches and adapted battery operated toys can teach a child with limited motor abilities cause and effect in addition to giving the opportunity to play independently. A voice synthesizer can allow a child to communicate with peers as well as with trained adults. Social isolation, so pervasive and disabling, can be greatly diminished.

Another critical area in intervention is feeding and nutrition. Difficult feedings, poor oral pharyngeal function and reflux, predispose to malnutrition and aspiration. These problems are seen in 20-25% cerebral palsy children. A standard upper GI can document anatomy, but radionuclide studies are a more sensitive tool to define gastroesophageal reflux and delayed gastric emptying. Detailed attention to oral and pharyngeal function need to be routinely included.

Swallowing videofluoroscopy, often referred to as a "cookie swallow" or "modified barium swallow," is a technique where a videotape is made of the child ingesting different consistencies of barium in an upright position. An appropriate seating device should be used for proper results. Therapist and physician can then better assess aspiration risk and determine whether oral feeding can be done partially, completely, or not at all. Studies have shown that recommendations made on the basis of clinical exam alone are changed up to 40% of the time after the videofluoroscopy is done. Small amounts (less than 10%) of aspiration observed during the study, particularly if decreased or eliminated by changes in position or technique of feeding, do not necessarily preclude a child from oral feeding, but do indicate needs for limitations or restrictions.

Many children who cannot handle liquids can handle a thickened liquid/semi-solid diet which may be nutritionally adequate and allow them to avoid a gastrostomy tube. Very rarely, if ever, will a child who handles liquids be unable to handle semi-solids. If a tube is indicated, the results from the swallow study helps convince reluctant parents. There is a superb article by Ann Campbell in the April 1988 issue of *The Exceptional Parent* entitled, "Tube Feeding: Parental Perspective" that can help with this difficult decision. This author studied a small sample at the University of Michigan/Mott Children's Hospital and found that the incidence of pneumonia correlated strongly with compliance with post-videofluoroscopic recommendations (chi square statistic = 6.36, p less than 0.025).

Medical advances have presented us with an increased number, although not an increased proportion, of children with developmental and motor handicaps. We are beginning to recognize the characteristics of good early intervention which may prevent or ameliorate long-term disability for the child who is at risk. There is an array of services and resources that can enhance function and

prevent secondary or added disabilities for the child identified as handicapped. Referrals can be made to many local resources including Developmental Disability Services centers, Easter Seals Centers, Arkansas Children's Hospital Specialty Clinics or Dennis Developmental Center. In addition other neurodevelopmental centers and rehabilitation therapy departments with physical occupational, speech and language therapists are available throughout the state.

The selection and coordination of these resources into a cohesive plan of intervention brings together child, family, and service providers into a team striving for functional and developmental goals. This is today's challenge in pediatric habilitation.

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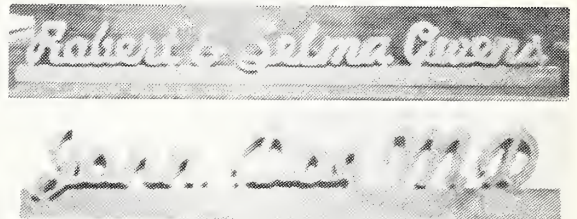
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Treatment of Stage A1 Prostate Cancer

Alex E. Finkbeiner, M.D., William E. Atkinson, M.D., W. Ducote Haynes, M.D., Dale E. Johnston, M.D., and S. William Ross, M.D.*

Problem

A 70-year-old man presented to the Second Opinion Panel with a previous diagnosis of adenocarcinoma of the prostate, stage A1, Gleason's grade 2-2.

The patient had had a two-year history of progressive problems with polyuria, nocturia and finally retention. A transurethral resection of the prostate (TURP) was performed four weeks earlier. Pre-operatively his acid phosphatase was normal, and postoperatively his bone scan was normal. The patient had done well postoperatively and was asymptomatic when he presented. Digital rectal examination was normal.

His treatment plan was to include radiation therapy. Before beginning treatment, he met with the panel for a discussion on the management of his case.

Pathology Review

Dr. Atkinson

A review of histopathology revealed moderately well-differentiated adenocarcinoma of the prostate, combined Gleason's grade 4 (on a scale 2-10, best to worst).¹ His pathology report revealed that he had had twelve grams of tissue resected and that there was only a single chip which contained adenocarcinoma.

Diagnostic X-ray Evaluation

Dr. Johnston

The bone scan is the most appropriate diagnostic test in nuclear medicine for early stage prostate tumors. If the bone scan is negative and if there is no other evidence of tumor spread beyond the prostate, no other diagnostic tests are usually performed. However, if evidence from

the biopsy indicates that there is invasion beyond the prostatic capsule, then a computed tomographic (CT) scan of the pelvis would be warranted to evaluate for adenopathy. In this patient's case, the bone scan taken four weeks earlier was reviewed and was found to be normal. No other diagnostic tests were recommended at this time.

If another biopsy should be done, a transrectal ultrasound could be done to determine the extent of local disease and could be utilized in biopsying the appropriate area of the gland.

Urology Opinion

Dr. Finkbeiner

We have no evidence that any cancer remains in this 70-year-old man. Considering his age and the stage and grade of his tumor (stage A1, Gleason's 4), chances are good that his prostate cancer will not affect his longevity.

His therapeutic options include (1) observation, (2) radical prostatectomy, or (3) irradiation. In a true stage A1 prostate cancer, as we believe this patient to have, the patient needs only to be followed for evidence of recurrent disease.^{2,3} Thus, observation alone is a reasonable option for this patient, monitoring his serially with digital examination of the prostate and prostatic specific antigens (PSAs). PSAs, which are more sensitive than prostatic acid phosphatases (PAPs), could be drawn approximately every six months.⁴ If they rise, indicating recurrent diseases, and/or the prostate become palpably abnormal, then restaging and alternative treatment could begin at that time.

If the patient is uncomfortable knowing that residual tumor may be present and would consider more aggressive therapy if, indeed, it was present, I would recommend a restaging procedure. The prostate could be rebiopsied either via needle biopsy or repeat transurethral

* St. Vincent Infirmary Cancer Center, Two St. Vincent Circle, Little Rock, Arkansas 72205.

resection. If no residual tumor is found, the observation option is recommended. If residual tumor is present and the patient desires treatment, I would recommend a radical prostatectomy because, in my opinion, it is more definitive than radiation therapy for localized prostate cancer.

Radiation Therapy Option

Dr. Haynes

Interstitial irradiation or external beam irradiation can be used as definitive treatment in patients with localized prostate cancer,⁵⁻¹¹ but generally no treatment is recommended for stage A1 disease. This patient should continue to see his physician for regular check-ups and to be alert for anything that might indicate progression of his disease. This is a very slow-growing tumor and may not need treatment in this patient's lifetime.

Medical Oncology Opinion

Dr. Ross

Because chemotherapy is of no value in stage A1, A2, and B1 carcinoma of the prostate, the medical oncologist has no role except as "friend of the court." Since metastasis to regional nodes increases from 2% to 22%¹² and 5-year progression rate from 2% to 35%² between stage A1 (no palpable tumor, less than 5% tumor in biopsy and low grade) and stage A2 (no palpable tumor but more than A1), it is of interest that eight of 23 stage A patients under age 60 years at diagnosis at the Mayo Clinic² re-staged on reexamination to 15 A1 and eight A2.

In the largest study reported to date,³ the Johns Hopkins group found 44 of 94 patients with stage A1 prostate carcinoma died within eight years (mean of 3.5 years) without progression and are not evaluable. Of the 50 remaining evaluable patients, 16% had progressive disease 3.5 to eight years (median of seven years) after diagnosis and died an average of two years later due to disseminated disease in 75% (six of eight patients). One patient alive with widespread disease eight years after progression. Based on this type of data, no treatment seems a reasonable option for this patient, providing rectal examinations and prostate specific antigen tests are done every four months.

Consensus

The panel agreed with the previous diagnosis of stage A1, Gleason's grade 4, adenocarcinoma of the prostate. The panel did not feel that radiation therapy or radical prostatectomy was indicated since there was no evidence of recurrent disease. Due to the patient's age (70) and because this tumor is slow-growing, it was the consensus of the group that treatment may not be necessary in this patient's lifetime. The panel recommended that the patient be followed-up at least every six months by his physician and that he report any symptoms before that time to his physician. If symptoms or evidence of recurrent disease occurs, then another biopsy should be taken to stage the disease and to consider the therapeutic options at that time.

Acknowledgment

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Internal Medicine Conference

November 1, 12:30 p.m. Presented by Larry Price, M.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Patient Information and Education

November 3, 12:30 p.m. Presented by Charles Marsh, Pharm.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Cancer of the Bladder Current Management

November 5, 8:30 a.m. - 12:30 p.m. Presented by Randall G. Rowland, M.D., Indiana University School of Medicine. Sponsored by St. Vincent Infirmary Medical Center/Cancer Center. Center for Education, St. Vincent Infirmary. Three hours Category I credit.

Third Annual Trauma Symposium

November 5, 8:00 a.m. - 2:00 p.m. Presented by Dr. John R. Cone. Sponsored by UAMS Continuing Education for Physicians. Little Rock Hilton Inn. Fee: \$10. Four Category I credit hours.

Eating Disorders - Food for Thought

November 10, 12:30 p.m. Presented by Russell Williams, MSW. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

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November 12, 10:30 a.m. Presented by Dr. Stephen Kemp. Sponsored by AHEC - Northwest. Coy's Place, Fayetteville. Pre-game luncheon and transportation to Razorback Stadium. One Category I credit hour.

Tumor Conference

November 15, 12:00 noon. Presented by Dr. Lai Bui. Sponsored by AHEC - Fort Smith. Seventh Floor Dining Room, Sparks Regional Medical Center. One Category I credit hour.

Chronic Diarrhea

November 16, 12:00 noon. Presented by Dr. Kevin Donovan. Sponsored by AHEC - Fort Smith. Doctor's Conference Room, Sparks Regional Medical Center. One Category I credit hour.

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November 16, 12:30 noon. Presented by Dr. F. A. Hutcheson. Sponsored by AHEC Southwest. St. Michael's Hospital, Texarkana. One Category I credit hour.

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November 17-19, 8:00 a.m. - 5:15 p.m. Presented by Frank C. Miller, M.D., and Glenna Roberts, R.N.P. Sponsored by the UAMS Continuing Education for Physicians. Riverfront Hilton Inn, North Little Rock. Fees: Physicians, \$150 for full conference; others, \$65 for full conference. Fee prorated for two or one-day participation. Up to 20-1/2 Category I credit hours available.

Cervical Cancer: An Infectious Disease?

November 19, 8:30 a.m. - 12:30 p.m. Presented by George D. Wilbanks, M.D., Rush Medical College, Chicago, Illinois. Sponsored by St. Vincent Infirmiry Medical Center. Center for Health Education, St. Vincent Infirmiry Medical Center. Three hours Category I credit.

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Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Metabolic Neurology Conference, first Wednesday, 1:00 p.m., Physicians Lounge, 2nd Floor
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Second Floor Classroom
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
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As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

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Child Psychiatry Clinical Case Conference, first Friday, 1:00 p.m., UAMS Child Study Center Conference Room.
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Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
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Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds/Clinical Case Conference, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building, Room 159
Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Morbidity and Mortality Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A.
Surgery Resident Case Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A
Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Conference, last Wednesday, 5:00 p.m., UAMS
Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS
VA Diagnostic Imaging Conference, every Tuesday, Wednesday and Thursday, 8:00 a.m., LRVA Nuclear Medicine Conference Room, Room 1D173
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., LRVA, Building 66, Room 38

VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., NLRVA Building 89, Conference Room, or Arkansas Rehab Institute
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Surgery Service General Chest Topics (Combined Surgery/Medicine Lung Conference), every other Monday, 12:15 p.m., LRVA, Room 2D109.
VA Surgery Service Lung Cancer Conference, every Tuesday, 3:00 p.m., LRVA, Room 2E142.
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Tumor Conference, each Tuesday, 1:00 p.m., VAMC, Room 2D109

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pediatric Conference, third Friday, 12:15 p.m., Union Medical Center.
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital
Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, every four months, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, MO
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
Neurological-Neurosurgical Conference, first Monday, 12:00 noon, St. Bernard's Dietary Conference Room
Neuroradiology Conference, second Friday, 12:00 noon, St. Bernard's Dietary Conference Room
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Wynne Tumor Conference, third Tuesday, 6:00 p.m., Grecian Steak House, Wynne, every four months.

PINE BLUFF-AHEC

Behavioral Science Conference, first and third Thursday, 12:30 p.m., Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, first and fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Geriatrics Conference, third Friday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Orthopedic Case Conference, second and fourth Thursday, 12:30 p.m., Jefferson Regional Medical Center.
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, fourth Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Surgery Conference, first Friday, 12:30 p.m., Jefferson Regional Medical Center
Tumor Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Cardiology Conference, alternating Fridays, 11:30 a.m., St. Michael Hospital
Cine Radiology, second Friday, 12:00 noon, Wadley Regional Medical Center.
Echo-Cardiology, fourth Friday, 12:00 noon, Wadley Regional Medical Center
Internal Medicine Conference, second Tuesday, 12:00 noon, St. Michael Hospital
Neuro-Radiology Conference, second and fourth Wednesday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Surgeons Pathology Conference, second Thursday, 7:00 a.m. breakfast, Wadley Regional Medical Center
AHEC Tumor Conference, first Wednesday, 7:00 a.m. breakfast, St. Michael Hospital

NHLBI 1988 Report Available

The National Heart, Lung, and Blood Institute (NHLBI) is pleased to make available the *1988 Report of the Joint National Committee on Detection, Evaluation, and Treatment of High Blood Pressure (JNC IV)*. The report was recently released by the coordinating committee of the National High Blood Pressure Education Program which is sponsored by NHLBI. This represents the fourth in a series of these reports which have provided physicians and other health professionals with updated therapy recommendations for more than a decade.

JNC IV reviews, updates, and expands the 1984 recommendations for controlling hypertension. The new report translates the results of the latest clinical trials to medical practice; addresses the needs of special populations; examines factors that influence the cost of care; and provides additional guidelines for managing high blood pressure in the presence of cardiovascular disease and other coexisting medical conditions. It is intended as a guide for practicing physicians and other health professionals in their care of hypertensive patients and as a reference for those participating in the many community HBP programs throughout the country.

A copy of JNC IV may be obtained free of charge by contacting The National High Blood Pressure Education Program Information Center, 4733 Bethesda Avenue, Suite 530, Bethesda, MD 20814; (301) 951-3260.

Caduceus Club Helps to Purchase UAMS Head-Mounted Video Camera

The department of surgery in the College of Medicine at the University of Arkansas for Medical Sciences recently purchased a head-mounted mini video camera system to be used in training its residents.

A \$12,500 grant from the Caduceus Club, the UAMS College of Medicine alumni association, funded a major portion of the purchase.

"The Caduceus Club's contribution has enabled us to have the most sophisticated video equipment available to use in training resident physicians," Dr. Robert Barnes, chairman of the department of Surgery, said. "This state-of-the-art camera system allows us to observe techniques and offer constructive criticism."

Surgery residents wear the camera during surgery exercises in the laboratory, explained Dr. Nicholas Lang, associate professor of Surgery. Because the camera is head-mounted, it provides an unobstructed view of exactly what the resident sees during exercises. The

camera feeds this image to a video tape recorder and the resident's performance is judged at length and graded by instructors at a later time, Dr. Lang said. The camera may also be used during actual surgical procedures to evaluate how well laboratory training transfers to the operating room.

The camera/video system also has many long-term benefits. "It will allow our surgeons to be better trained in the manual skills used in surgical procedures, making them perform more efficiently with a reduced possibility for complications. All this ultimately benefits the recipient of the physician's skill - the patient," he said.

Before the camera's purchase, there was no way to have an organized, uniform surgical skill training program, Dr. Lang said. "We could only learn by observing and being observed."

The camera/video system also allows surgical skills that once required five or six years of training to be learned in the first and second years of a more intensive surgical skills program, Dr. Lang explained.

Joint Commission Publication Looks at Case Management

Leaders in numerous areas of health care offer their experience and theories of case management in *Case Management: Guiding Patients Through the Health Care Maze*, a special Quality Review Bulletin (QRB) publication available from the Joint Commission on Accreditation of Healthcare Organizations.

The bulletin examines case management therapy and practice from the perspective of the physician, the nurse, the ethicist, the patient's family, and third-party payers. Authors describe case management models for the elderly, AIDS patients, low-income patients, children, psychiatric patients, and patients with catastrophic and chronic medical conditions.

The price of *Guiding Patients Through the Health Care Maze* is \$30.00. To order, or for more information, contact the Joint Commission's customer service unit at (312) 642-6061, extension 650.

Support the Medical Education Foundation for Arkansas (MEFFA). Call the Society office at 224-8967 for details!

AIDS FOUNDATION HONORS THREE AMS MEMBERS

The Arkansas AIDS Foundation recently honored several Arkansans who have responded in significant ways to the AIDS epidemic at an "Evening of Celebration" in the UALR Fine Arts Auditorium.

In addition to other award winners, three Arkansas Medical Society members were honored. **Dr. William Mason**, a Little Rock pulmonary disease specialist, was awarded a plaque for the Excellence in Health Care/Individual Category. The plaque read in part that Dr. Mason had won the respect and admiration of the AIDS Foundation for his personal efforts in helping with the AIDS crisis.

Harold Hedges, M.D., and **Robert M. Searcy, M.D.**, won awards for in the Health Care/First Step Category. Dr. Hedges is a family practitioner and Dr. Searcy is an internist. Both physicians practice in Little Rock.

A highlight of the evening was the unveiling of "Keeping in Touch," a photographic exhibit by Andrew Kilgore, commissioned by the Arkansas AIDS Foundation. It was the first public viewing of the photographs which depicted Arkansans who are active in the struggle against AIDS.

The Foundation is the only statewide, private, non-profit agency working exclusively on the problems of AIDS in Arkansas. It is seeking to provide Arkansans with accurate information about the disease as well as stemming the progression of AIDS and giving assistance to people whose lives have been touched with the disease.



A reception and special showing of Andrew Kilgore's photographs preceded the awards ceremony.



Dr. William Mason accepts the plaque for the Excellence in Health Care/Individual Category from the Arkansas AIDS Foundation.

Dr. Clark Fincher, a Searcy internist, recently spoke to the Searcy Lions about diabetes and the treatment methods being used today.

Three Pine Bluff physicians were recently certified in geriatric medicine. **Drs. John W. Nuckolls, James A. Lindsey and William H. Freeman** passed the exam, which was given for the first time by the American Board of Internal Medicine and the American Board of Family Practice. Dr. Nuckolls is an internist, while Drs. Lindsey and Freeman are family practitioners.

A sports medicine seminar was held at the West Memphis High School recently. Among the speakers at the conference were **Dr. Guy L'Heureux**, a West Memphis orthopaedic surgeon, and **Dr. Steve Schoettle**, a West Memphis surgeon.

Dr. Tom Atkinson, a Siloam Springs internist and 1989 chief of staff for Siloam Springs Memorial Hospital, attended a conference at Harvard Medical College. The conference topics included cardiac care as well as cholesterol control and hypertension control techniques.

Dr. Russell Mayo, a Texarkana family practitioner, has been designated as an aviation medical examiner by the Federal Aviation Administration. The FAA appoints civilian physicians who have had special training to perform the physical examination needed by pilots to obtain flying licenses.

NEW MEMBERS

PULASKI COUNTY MEDICAL SOCIETY

Hicks, David L., Family Practice, Little Rock. Born November 29, 1953, Springfield, MO. Pre-medical education, University of Arkansas, Fayetteville, B.S., 1981. Medical education, University of Arkansas for Medical Sciences, 1985. Internship/residency, Department of Family and Community Medicine. Board certified, Family Practice.

Franklin, Gregory A., Neonatal-Perinatal Medicine, Little Rock. Born February 22, 1952, Enid, OK. Pre-medical education, Drury College, Springfield, MO, B.A., 1973. Medical education, University of Oklahoma College of Medicine, 1977. Internship/residency, U.S.A.F. Medical Center, Keesler AFB, Biloxi, MS. Practice experience, 2 years U.S.A.F. Hospital Altus AFT; 2 years Director of Neonatal ICU, Malcolm Grow U.S.A.F. Medical Center, Andrews AFB; 2 years DeBois Regional Medical Center, DuBois, PA. Board certified, Pediatrics, Neonatal-Perinatal Medicine.

Rice, Charles D., Ophthalmology, Little Rock. Born April 26, 1955, DeRidder, LA. Pre-medical education, Northeast Louisiana University, Monroe, LA, B.S., 1976. Medical education, Louisiana State University, New Orleans, 1980. Internship/residency, North Carolina Baptist Hospital, Bowman Gray School of medicine, Winston-Salem, NC. Practice experience, Eye Medical

Center, Baton Rouge, 1 year. Board certified, Ophthalmology.

SEBASTIAN COUNTY MEDICAL SOCIETY

Edwards, Gary S., General Practice, Fort Smith. Born July 30, 1954, Fort Smith. Pre-medical education, Arkansas Tech University, B.S., 1975. Medical education, Kirksville College Osteopathic Medicine, 1980. Internship, Normandy Osteopathic Hospitals, St. Louis. Residency, Doctors Hospital, Columbus, OH. Practice experience, Barling, AR, 3 years; Fort Smith, 3 years. Chief resident, Ohio University College of Medicine. Board certified, AOBGP.

RESIDENT/INTERN SECTION

Brown, Pamela Jo, Ob/Gyn. Born June 30, 1959, Atlanta, GA. Pre-medical education, Harding University, B.S. Medical education, UAMS, 1985.

Hasek, Martin, Anesthesiology. Born September 13, 1940, St. Louis, MO. Pre-medical education, Washington University, A.B. Medical education, University of Missouri, Columbia, 1966.

Wylie, Paul E., Psychiatry. Born March 25, 1962, St. Louis, MO. Pre-medical education, University of Oklahoma, B.S. Medical school, University of Oklahoma, 1988.

IN MEMORIAM

DR. JOHN QUINCY ELLIOTT

John Quincy Elliott, M.D., a retired Blytheville family practitioner, died August 26, 1988. He was 79.

Dr. Elliott served as an assistant surgeon with the Coast Guard Reserve during World War II and was a member of the Board of Medical Examiners of Physicians and Surgeons for the states of California, Michigan and Arkansas. In addition to being a member of the American Society of Abdominal Surgeons, Dr. Elliott was a life member of the Arkansas Medical Society, having been recognized for over 50 years medical practice.

He was the former physician for the Blytheville High

School football team and was responsible for the establishment of the Golden Gloves boxing program in that community.

Dr. Elliott is survived by his wife, Lydia Taylor Elliott; a son, Dr. Robert T. Elliott of Burlington, NC; five daughters, Sally Jo Elliott of Blytheville, Elizabeth Merrill of Austin, TX, Grace Reiland of Lexington, SC, Joan Driver of Fayetteville, and Carolyn Smith of Cayse, SC. Other survivors include two sisters, Nettie Klein Mannatt of Corning and Grace Ratcliff of Destin, FL, and 11 grandchildren.

AIDS IN ARKANSAS

AMS Special Committee on AIDS

William N. Jones, M.D., Chairman

Medical Students Who Care Fighting AIDS Through Education

Vickie L. Henderson*, Carla Scott, Tim Coalwell, and Tonya Preston

Introduction

Fighting AIDS Through Education (F.A.T.E.) is a group of medical students who are concerned about AIDS and who are willing to share their knowledge about it with high school students. As future physicians, we are concerned with disease prevention. Prevention, through education and behavioral change, is currently the only way to control the spread of this disease. We want to educate the youth of Arkansas so that they know how AIDS is transmitted and how they can protect themselves.

History

In March 1988, the American Medical Association Medical Student Section launched a nationwide program to educate adolescents about Acquired Immunodeficiency Syndrome. Scott Binet (M-3) represented the University of Arkansas for Medical Sciences at the National Training Conference held in Washington, D.C. Following this, a national tele-conference was broadcast to stimulate the interest of medical students.

Under the leadership of Scott Binet, a group of sophomore and freshman medical students organized the program which has come to be known as F.A.T.E. Their efforts culminated in a pilot presentation at Bryant High School in May of 1988. This proved very successful and provided the necessary input to refine the presentation.

Organization

The F.A.T.E. program is targeted to high school students, grades 10-12. The presentation is designed to be

interactive and the groups to consist of 25-35 students. Two medical students, one male and one female, administer a pre- and post-test to obtain a baseline knowledge level of the students and to monitor the effectiveness of the presentation. Each student receives a pamphlet, "Understanding AIDS," published by the Surgeon General, Dr. C. Everett Koop.

Our program is unique in that as future physicians, we are able to earn the students' trust quickly. In contrast to other programs, our youthfulness allows us to relate to them. Student participation is encouraged, and they have been very frank and responsive.

F.A.T.E. is a sophomore class project that will continue as long as AIDS is a problem. We are trying to recruit junior and senior medical students to participate. In the spring semester, the freshman medical students will be involved, and they will be responsible for continuing the project the following year.

In the future, we hope that F.A.T.E. will serve as a model program in the development of similar programs in other colleges. The College of Pharmacy has expressed an interest in beginning a drug education program, and we will assist them in organizing this.

Presentation

The content of our presentation is the product of several months' work and follows the basic guidelines established by the student chapter of the American Medical Association.

We begin the presentation by answering the question, "What is AIDS?". Since the presentation is geared to the high school student, we feel confident that the majority of students have been exposed to at least one basic biology class. With this in mind, we explain the mechanism of in-

*F.A.T.E. Coordinator, 601 Napa Valley Road, #328, Little Rock, AR 72211.

AIDS IN ARKANSAS 1988

January 1 - August 31, 1988

Total number of cases reported	72	CASES BY AGE GROUP	
Number of deaths	23	Less than 20	1
		20 - 29	24
		30 - 39	33
		40 - 49	7
		50 - 59	2
		60 or more	5
CASES BY SEX			
Male	66		
Female	6		
CASES BY RACE		OPPORTUNISTIC DISEASE	
White	56	Pneumocystic Carinii	32
Black	16	Kaposi's Sarcoma	4
		Pneumocystis Carinii	
		and Kaposi's Sarcoma	2
		Other	34
CASES BY RISK GROUP			
Homosexual/Bisexual*	44		
IV Drug User	3		
Hemophiliac	1		
Transfusion	6		
Heterosexual (Contacts)	4		
NIR#	4		

* Of the 44 homosexual/bisexuals, 10 are/were IV drug users

No identified risk group (NIR)

AIDS IN ARKANSAS 1985 - 1988

Total number of cases reported	162	CASES BY AGE GROUP	
Number of deaths	86	Less than 20	1
		20 - 29	55
		30 - 39	71
		40 - 49	23
		50 - 59	5
		60 or more	7
CASES BY SEX			
Male	151		
Female	11		
CASES BY RACE		OPPORTUNISTIC DISEASE	
White	129	Pneumocystic Carinii	79
Black	33	Kaposi's Sarcoma	8
		Pneumocystis Carinii	
		and Kaposi's Sarcoma	5
		Other	70
CASES BY RISK GROUP			
Homosexual/Bisexual*	99		
IV Drug User	16		
Hemophiliac	1		
Transfusion	8		
Heterosexual (Contacts)	7		
NIR#	5		

* Of the 99 homosexual/bisexuals, 26 are/were IV drug users

No identified risk group (NIR)

Source: Arkansas Department of Health.

AMS/Arkansas Department of Education Progress Report

The AMS/Arkansas Department of Education regional meetings calendar will begin in the spring of 1989. The spring time frame was selected to allow for planning and scheduling of the seminars. The AMS Committee on AIDS reports 127 members from 41 counties have responded to the survey for volunteers to serve as medical expert in the regional meetings and at local schools.

The Committee is presently participating in administrative planning with Mr. Gary Parrish, a health specialist with the Arkansas Department of Education, and his staff to organize meeting dates and the curriculum to be utilized.

Volunteers will be notified of organizational meetings during which they will be briefed on the curriculum to be used.

fection, the associated physiology, and the symptomatology of the disease in a clear and concise manner.

Epidemiology is discussed briefly, and we give current data concerning the incidence of the disease in our state. This is to insure that the students realize that this disease is not restricted to large metropolitan cities such as New York or San Francisco.

The majority of the presentation is spent dispelling myths and discussing prevention. High risk groups are identified and we give special emphasis to those groups who engage in sex with multiple partners (heterosexuals and homosexuals). Emphasis is also given to the group that engages in IV drug use and the sharing of needles.

As stated previously, we discuss prevention and we head our list of preventative measures with abstinence. In addition, mutual monogamy, safe sex, and the importance of not sharing needles are also stressed.

We end the presentation by giving the students the AIDS hotline telephone number for Arkansas and discussing the basic procedures and costs of testing.

To assess the effectiveness of our presentation, we give the students a short pre- and post-test composed of

twenty true/false questions. The following are sample questions from the test:

1. Everyone infected with the AIDS virus has already become sick.
2. AIDS is spread by kissing.
3. A person can get AIDS from donating blood.
4. Birth control pills/diaphragm will prevent HIV infections in women.

These questions are frequently answered incorrectly on the pre-test. However, data correlating, pre- and post-test scores reveal improvement on the post-test.

Acknowledgements

We would like to express our gratitude to Joan H. Faubion, Ph.D., Associate Director for AHEC Programs, and Roben Keen for enabling us to achieve our goals. We would also like to thank the Arkansas Medical Society Special Committee on AIDS, I. Dodd Wilson, M.D., Dean of the College of Medicine, and his staff, the Medical Student Council and the Academic Support Center at UAMS. We also appreciate all of the medical students who have been willing to participate.

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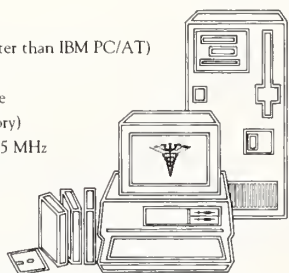
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BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE

There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED

CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Packs of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by C's on the other.

Issued 1/87

Reference:

1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.



CAFAD276

0160N8

Newer Concepts in the Diagnosis and Treatment of ARDS

Harvey J. Sugerman, M.D.*

Introduction

Acute respiratory distress syndrome (ARDS) is an ill-defined disorder with multiple etiologies which usually required mechanical ventilation. The National Heart, Lung and Blood Institute, Division of Lung Diseases, Task Force on Research in Respiratory Disease estimates that 150,000 cases occur each year. Many of these are young, previously healthy persons. It is a common complication seen in multisystem organ failure associated with trauma which is the largest cause of death in individuals under the age of 40 and the third leading cause of death in the United States regardless of age. The overall mortality is impossible to assess, but must be quite high. Ninety-one percent of the 90 patients enrolled in the Extra-Corporeal Membrane Oxygenator Study (ECMO), most of whom probably had ARDS, died. Data from the nine centers participating in the ECMO study showed that more than 75% of the 600 patients receiving an inspired oxygen concentration greater than 50% died. From 1973 to 1976, 119 patients were admitted to the Respiratory and Surgical Intensive Care Units of San Francisco General Hospital with a diagnosis of ARDS (7% of all their intensive care unit admissions). Of these, 53% died. Although the majority of these deaths were not solely due to respiratory failure, this probably affected their morbidity and mortality.

Possible causes for ARDS include pulmonary contusion, gastric vomiting with aspiration pneumonitis, burn inhalation injury, massive blood transfusion, neurogenic pulmonary edema, pulmonary fat embolism syndrome, and septicemia. It is for these reasons that the majority of patients with ARDS are located on a surgical service and the problem was first recognized in the surgical literature.¹

Case Report

The following unfortunate case, which was seen in our emergency room several years ago, demonstrates the difficulties secondary to ARDS that can be encountered by a surgeon caring for an acutely injured patient. A 22-year-old girl, involved in a head-on vehicular collision, arrived hypotensive and comatose, with a flail chest, multiple rib fractures, as well as pelvic and multiple leg fractures. Chest tubes were inserted bilaterally for hemopneumothorax. Abdominal lavage was negative for blood. She was given 10 units of blood and 15 liters of lactated Ringer's solution because of persistent hypotension. Her blood pressure remained refractory to fluid administration. Her initial room air oxygen tension (PaO_2) was 52 torr. She was intubated and given 100% inspired oxygen, with a transient increase in PaO_2 to 76 torr. However, this rapidly fell to 50 torr. The emergency physicians were unwilling to institute positive end-expiratory pressure (PEEP) ventilation because of her hypotension and the possibility that her cardiac output might fall with PEEP, which might further compromise her blood pressure. Within four hours her PaO_2 fell to 22 torr on 100% inspired oxygen, her blood pressure became unresponsive to dopamine infusion and she died. This is a classic example of severe ARDS occurring in a severely traumatized patient. Her brain injury may have precluded survival; however, failure to correct her severe hypoxemia was probably the immediate cause of her death. Possible etiologies of ARDS in this patient included lung contusion, pulmonary fat embolism syndrome, gastric aspiration, and leukoagglutinin reaction to blood transfusion. Optimal treatment should have demanded urgent placement of a flow-directed pulmonary artery catheter and aggressive use of PEEP titrated with cardiac output. Absorptive atelectasis secondary to 100% inspired oxygen as well as excessive fluid administration probably compounded her pulmonary problem.

* Dr. Sugerman is the David M. Hume Professor of Surgery, Medical College of Virginia, Virginia Commonwealth University, Richmond, VA. Presented in part at the Surgical Symposium Lecture in Hot Springs, AR, April 1988.

Pathophysiology of ARDS

All of the causes for ARDS are associated with a diffuse injury to the alveolar-capillary membrane.^{2,3} A capillary leak ensues, which leads to the loss of fluid into the alveolar interstitium, where it can be cleared by pulmonary lymphatics. The lymphatic network in the lung is quite extensive and can increase the rate of clearance by a factor of 20. Overload of the lymphatic system is associated with the loss of fluid into the alveolus. In contrast to the pulmonary capillary endothelium, the alveolar membrane is very tight. However, direct lung injury (i.e., lung contusion) will also disrupt the alveolar membrane. Alveolar fluid accumulation leads to a washout or inhibition of surfactant and diffuse alveolar collapse. Perfusion of unventilated alveoli leads to an increase in pulmonary shunt fraction, or ventilation:perfusion (V/Q) mismatch, with the return of unoxygenated blood to the left heart. There will obviously be some impairment of oxygen diffusion as well, but the primary problem appears to be increased shunt, since the V/Q ratio will often respond rapidly to positive end-expiratory pressure (PEEP) ventilation. More recent evidence has shown that prostaglandin induced constriction of small pulmonary airways is a part of the pathogenesis of diffused microatelectasis in septic induced ARDS, since the hypoxemia in septic animals can be blocked with ibuprofen without any reduction in extra-vascular lung water accumulation or capillary permeability. Decreased airflow accelerates alveolar collapse and pulmonary shunting.^{4,5} Intravenous ibuprofen may impair renal function and is not yet available for clinical use in septic ARDS.

Diagnosis of ARDS

The diagnosis of ARDS is based on the finding of hypoxemia poorly responsive to supplemental oxygen. In the absence of head injury and respiratory depression, these patients usually do not have hypercarbia, since they are often tachypneic and able to blow off carbon dioxide. This is not primarily due to the fact that carbon dioxide is 100 times more diffusible than oxygen, but is probably secondary to the linear CO₂-hemoglobin equilibrium curve, in contrast to the curvilinear O₂-hemoglobin equilibrium curve. Thus, those alveoli that are being ventilated are able to maximally unload carbon dioxide, whereas they can only load a limited amount of oxygen. The development of hypoxemia takes time and may not be appreciated on initial evaluation of the patient. Fluid accumulation in the interstitium and alveoli leads to a diffuse, peripheral infiltrate on the chest radiograph. This may be a delayed finding and absent on the initial film.⁶ A high index of suspicion is required. Patients with the potential for developing ARDS need to be followed carefully for pulmonary deterioration. A patient who becomes confused or combative should have an arterial blood gas determination, not a tranquilizer.

Fluid Management in ARDS

When the spigot is turned up on a perforated garden hose, there is marked increase in the escape of water from the hose. Since the pathophysiology of pulmonary contusion injury is, in part, secondary to alveolar-capillary membrane injury, it makes sense to avoid excessive fluid administration and volume expansion in these patients. This has been clearly shown in animal studies,^{7,8} but has been difficult to document in patients. Thus, the patient should be kept as dry as possible. Adequate fluid resuscitation must be provided, however, to permit peripheral perfusion, renal function, and oxygen delivery. Following acute medical and surgical resuscitation, these patients should be followed in an intensive care unit and undergo pulmonary artery catheterization with measurement of pulmonary wedge pressures. If possible, the wedge pressure should be kept less than 12 torr; however, some patients require a wedge pressure of 18 torr for adequate peripheral perfusion. Under these circumstances, one must temporarily "sacrifice" the lung in order to keep the rest of the body alive.

PEEP

If the patient develops hypoxemia that cannot be managed with supplemental oxygen by mask, he should be intubated and placed on mechanical ventilation with high tidal volumes (15 ml/kg). Ventilation with 100% oxygen can lead to absorptive atelectasis following the washout of nitrogen from partially ventilated alveoli; this leads to a further increase in pulmonary shunt and hypoxemia.⁹ The goal should be maintenance of an arterial oxygen tension (PaO₂) of 60 torr or more with an inspired oxygen concentration (FiO₂) less than 60%. Positive end-expiratory pressure ventilation (PEEP) may be necessary, and should be considered and used in the emergency room if difficulties with oxygenation are encountered there. As documented by the increase in functional residual capacity (FRC), PEEP will re-expand collapsed alveoli and keep them open during the expiratory phase of ventilation, thus decreasing pulmonary shunt.¹⁰⁻¹² In addition, it will also spread out the alveolar fluid decreasing the distance for oxygen diffusion.

Effect of PEEP on Cardiac Output

PEEP may cause a decrease in cardiac output by increasing alveolar and, thus, capillary pressures, increasing pressure on the vena cavae and pericardium and possibly shifting the inter-ventricular septum into the left ventricle.^{13,14} The use of PEEP demands the insertion of a pulmonary artery catheter to assure that cardiac output is maintained. Since PEEP exerts its effects rapidly, a PEEP titration can be quickly performed, raising the level of PEEP by 5 cm H₂O from 0 to 15 cm H₂O every 15 minutes and obtaining arterial and mixed venous oxygen levels, as well as measurement of cardiac output using the thermal dilution technique. For this purpose, a co-

oximeter right heart catheter should be used, since it allows on-line measurement of mixed venous oxygen saturation. If the cardiac output and/or the mixed venous oxygen tension fall, the level of PEEP must be reduced or further volume expansion instituted. Patients with respiratory distress who require PEEP have a decreased pulmonary compliance with attenuation of the effect of PEEP pressures as compared to normal individuals; thus, the very ill patient needs more PEEP and more PEEP is tolerated.¹² Occasionally it is necessary to raise PEEP pressures to as high as 40 cm H₂O.¹⁵ Hypotension is not a contraindication to the use of PEEP. Its effects must be measured with a pulmonary artery catheter before it can be presumed that PEEP will further impair cardiac output and cause hypotension. The heart will not work properly in the absence of oxygen; it is urgent that hypoxemia be corrected. Over the course of hours to days, the amount of PEEP can be progressively reduced.¹² In the absence of further pulmonary injury, such as aspiration, septic induced ARDS or pneumonia, the patient can usually be weaned from the ventilator with few long-term sequelae. It was initially thought that PEEP might drive the fluid out of the alveolar and interstitial space.¹² Subsequent studies have proven this to be false¹⁶ and, thus, it was not surprising that a clinical study of the prophylactic use of PEEP did not find it to be of any value.¹⁷

New Modalities of Treatment

High frequency jet ventilation (HFJV) has been recently introduced as a new ventilator modality for patients with acute respiratory failure.¹⁸ In our experience, this technique has only been helpful for the patients with a high volume leak secondary to major disruption of the tracheobronchial tree. In ARDS refractory to high levels of PEEP, HFJV has only prolonged the time to death. A recent study, however, has suggested that differential lung ventilation with different levels of PEEP adjusted to each lung's compliance curve in combination with HFJV may produce a few survivors who might otherwise have died,¹⁹ but the technology required is extremely complex and the costs astronomical.

Extracorporeal membrane oxygenation (ECMO) was proposed as a method to treat severe, end-stage ARDS. A randomized, prospective trial of EMCO, however, found it to be of no value.²⁰ Recent studies from Milan, Italy suggest that the randomized study may have been in patients whose lungs were irreversibly damaged and that earlier treatment aimed primarily at CO₂ removal may rest the lung from mechanical ventilation and PEEP-induced barotrauma improving recovery.²¹ Additional supporting data have been recently reported in this country.²²

Reversed inspiratory to expiratory (I:E) ratios have also been proposed. The normal I:E ratio is 1:2.²³ Ventilator I:E settings of 2:1, 3:1 or even 4:1 theoretically permit a slower inspiration of very stiff, poorly compliant lung alveoli. This may lower peak inspiratory pressures,

improve oxygenation and lower the amount of PEEP required. If enough time is not allowed for expiration, air-trapping will occur leading to "auto-PEEP." No randomized, prospective trials have been reported which confirm this hypothesis. As with HFJV, we have not found reverse I:E very helpful in patients with markedly reduced compliance and high peak inspiratory pressures.

Pulmonary Contusion

The presence of pulmonary contusion should not be associated with a knee-jerk response to intubate the patient and place him on mechanical ventilation. In a study from the University of Louisville,²⁴ which was not randomized, it was suggested that intubation may be associated with an increased incidence of pneumonia since the airway barrier is breached. Of course, intubated patients may have been more severely injured and, thus, at greater risk for the development of pneumonia. In their study, the majority of pulmonary contusion patients were able to be treated without intubation and mechanical ventilation. Management without intubation demands *careful* observation, with maintenance of a PaO₂ > 60 torr on *room air* and none of the following features: pre-existing pulmonary disease, impaired consciousness, abdominal injury resulting in ileus or surgery, skeletal injuries with immobilization, or renal failure. Adequate analgesia must be provided to decrease the pain of breathing, but not in excessive amounts to depress the respiratory drive. Long-acting local anesthetics can be used to block intercostal nerves associated with fractured ribs.

Aspiration Pneumonitis

Multiple injured patients develop an ileus and are at risk for gastric distension. It is important that a nasogastric tube be inserted early in their management to prevent vomiting and aspiration pneumonitis. Aspiration pneumonitis is also a risk during anesthetic induction and in patients receiving nasogastric feedings. The latter group should have gastric residuals checked before each feeding. Patients who vomit and aspirate require vigorous pulmonary toilet, including: coughing, thoracic percussion to loosen secretions, and humidification. Careful and vigorous nasotracheal suctioning should be urgently performed following the presumed diagnosis of aspiration to remove as much of the aspirated material as possible. Care must be taken to assure adequate oxygenation during suctioning, or hypoxemic induced cardiac arrhythmias and arrest can occur. Patients with pulmonary aspiration are at great risk for the development of bacterial pneumonia, as the alveolar fluid is a rich culture medium. Frequent cultures and the use of appropriate antibiotics are necessary. It was once thought that pharmacologic doses of corticosteroids were important to decrease the inflammatory response to acid aspiration.^{25,26} The data, however, clearly shows that there is no decrease in alveolar-capillary membrane injury with the use

of pharmacologic doses of corticosteroids in laboratory animals^{27,28} and that the risk of subsequent bacterial pneumonia is significantly increased in man with their use.²⁹

Pulmonary Fat Embolism

Pulmonary fat embolism syndrome can be seen following long bone or pelvic fractures and is probably secondary to the release of free fatty acids which are also markedly toxic to the lung. The incidence of pulmonary fat embolism syndrome appears to have declined markedly with the institution of early skeletal fixation. Free fatty acid injury to the lung also does not respond to pharmacologic doses of corticosteroids. Fatty acid injury and aspiration of hydrochloric acid probably cause direct injury to the alveolar-capillary membrane. It is not surprising that these do not respond to pharmacologic intervention.^{28,30}

Septic ARDS

The current primary killer of our severely ill surgical patients is infection with the development of multiple organ system failure.³¹⁻³³ Of these, the lung is the most commonly injured organ, with the development of severe ARDS. This may compound the pulmonary problem if a patient has suffered from pulmonary contusion, aspiration, or burn inhalation injuries. In contrast to fatty acid and hydrochloric acid injury, septic induced ARDS is probably an indirect mediated injury through the release of multiple substances involved in the inflammatory process. Recent evidence suggests that prostaglandin blockade can reverse the small airway constriction that occurs with a septic injury and, thus, improve arterial oxygenation in the absence of a decrease in extravascular lung water or protein flux.³³

The increased interstitial water and protein will eventually head to alveolar flooding and further collapse with worsening of the V/Q ratio. This rich, proteinaceous fluid markedly increases the risk of a bacterial pneumonia and a vicious cycle of further sepsis and pulmonary injury with the eventual production of a "liver lung" or pulmonary fibrosis. Recent studies in a pig pseudomonas model of septic ARDS has shown that the addition of both an H₁ and H₂ antihistamine to the prostaglandin blocker, ibuprofen, will block the increased pulmonary capillary permeability.³³ Deletion of any one of these agents was associated with significant deterioration of the model. Clinical studies are planned to evaluate this drug combination on septic patients. It is hoped that pharmacologic intervention will decrease the morbidity and mortality associated with ARDS.

Conclusions

The pathophysiology and treatment of ARDS is presented. Gamma Scintigraphic studies of albumin flux

have shown that increased pulmonary vascular recruitment can increase protein extravasation associated with increased capillary permeability in ARDS. Fluids should be administered judiciously, but adequate cardiac output and oxygen delivery must be assured. Patients with ARDS require intubation, mechanical ventilation and PEEP. Shock is not a contraindication to PEEP, which should be titrated with cardiac output as well as arterial and mixed venous oxygen tensions. Aspiration pneumonia must be prevented and the danger of bacterial pneumonia reduced. Corticosteroids have not been shown to have any benefit and may actually be detrimental. Recent studies have found that septic induced ARDS may be associated with prostaglandin induced small airway spasm which can be blocked with ibuprofen, without altering pulmonary capillary permeability. The addition of both H₁ and H₂ antihistamines to ibuprofen have blocked the increased pulmonary capillary permeability in a pig pseudomonas model. Unfortunately, no pharmacologic agents are currently available to treat ARDS. Aggressive pharmacologic intervention is on the horizon and will, hopefully, decrease the morbidity and mortality associated with ARDS. Until then, mechanical ventilation with PEEP must be relied on to splint the lung, like a broken bone, until it can heal itself.

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The Physician as a Community Volunteer

Kelsy J. Caplinger, M.D.*

President Reagan said at the White House luncheon that I attended to honor volunteers, "If you tap any American deeply enough, you will find a volunteer." This certainly can hold true for physicians.

Volunteerism is a uniquely American tradition. It is a way of life in the United States. Our first army was made up of volunteers. Many of our major institutions (for example, libraries) were started by volunteers. Last year 92 million persons volunteered a portion of their time. No one can accurately estimate the value of these services. In Arkansas, figures just released for 1985 show the value of volunteer services to state agencies alone approached 12 million. The dollar value of volunteer time nationally is estimated at \$110 billion.

The most common reasons that people volunteer are to help others, to gain job experience, and to meet new people. In the 19th century, Charles Kingsley said, "We act as though comfort and luxury were the chief requirements of life when all we need to make us really happy is something to be enthusiastic about." Any job, even medicine, can become routine drudgery at times. Volunteering gives you an outlet to be enthusiastic about and re-energize you. This has some very positive mental health aspects.

Why should a physician volunteer?

Philosophical reasons

By volunteering, you can do something for medicine. You are not doing something for yourself and your little

neighborhood of medical practice, but for medicine in a larger sense. One of the characteristics of any professional is the "norm of altruism." In any profession, a service ethic dominates the work place. Professionals are primarily concerned with the welfare of those whom they serve. This client orientation is thought to be the result of an altruistic interest in the well being of the larger community. This orientation, in part, results from the special "calling" that professionals feel in doing their service related work for others.

You owe a payback to those who trained you. To the patients who trained you. Patients who suffered inconveniences as you learned your trade. None of us will ever forget the emotional trauma to the patients (as well as the medical student) the first time we tried to pass a nasogastric tube or made repeated efforts at venipuncture.

You owe payback to your teachers. Your teachers who trained you could probably have received more financial remuneration by practicing medicine than by teaching you.

You owe payback to the state and nation that paid part of your education.

Volunteering is the rent you pay for the space you occupy in the community. Physicians take up a lot of space and need to pay appropriate rent. You have an obligation to set an example so that bright young people will enter the field of medicine. You need to ensure that in the future medicine for you and your families will be even better than today. In other words, help plan to replace yourself with someone even better qualified.

Volunteerism is not exactly what you take the Hippocratic Oath to do, but it is an obligation and an opportunity to invest back into the community part of what the community has given you.

* Dr. Caplinger is the founder and chairman of Medcamps of Arkansas. He was a 1984 Arkansas community service award winner and received the President's Volunteer Action Award in 1985. This is an excerpt from his keynote address to the 27th National Convention Alpha Epsilon Delta National Premedical Honor Fraternity.

Volunteering is the rent you pay for the space you occupy in the community. Physicians take up a lot of space and need to pay appropriate rent. You have an obligation to set an example.

Realistic Reasons

Your services are needed by somebody somewhere. Volunteering helps you keep in touch with reality. Each of us lives in three neighborhoods (home, community, and profession). You stay in each of these neighborhoods by inertia because of the busy life demands of all three. You have to make an effort to break out of your artificial world and stay in touch with reality. For example, I live three miles from the office, one mile from our church, and three miles from the golf course. I do not have to go far each week. The office is a sterile and artificial environment and there is a singleness of purpose there. Do I really know how other people live? If I had not been involved with the Medcamps program, I would never have had the experience of knowing some of the problems that hearing impaired children encounter. I would have no concept at all of the difficulties in daily living that the spina bifida patients endure.

Another realistic reason is that you develop friendships by volunteering. Different people have different perspectives and you need to come in contact with them in order to have a global view of the world. It will increase your circle of friends. I became involved in the Arthritis Foundation for other reasons, but now find that many of my close friends are also related to the Arthritis Foundation.

Another realistic reason to volunteer is that you will probably be a newcomer to a community someday when you enter practice. This is a quick way to get to know people and open yourself to new friendships. This is an opportunity to show people that you are interested in your new community and intend to be a permanent part of it. Volunteering for something for which you are not paid shows us that you are willing and that you are human. Patients really like to see their doctor involved.

There is a realistic value to you when you volunteer. One side effect is that it will help your practice of medicine. Management and newsletter consultants always include civic and volunteer activities as a way to build your practice and it will - but I do not recommend that you join anything or do anything solely to help your practice. This is a natural, secondary benefit and if it is the only reason you join an organization, the relationship will not last very long. You need to do something where you feel you are making a contribution and just let the chips fall.

By being involved with your local medical society and specialty group, you will also get to know many other physicians and this will help your practice and perspectives.

The last realistic reason I want to mention is that you can help people change their attitudes about doctors. A businessman friend of mine told me that knowing and working with a physician on a certain project helped change his mind about doctors. He said that he now knew that doctors were not interested only in Mercedes and brokerage accounts.

Excuses

There are many excuses for not volunteering. One is, "I am too busy." This is a lousy excuse. If you want something done right ask a busy person. You have heard this many times before. We are all busy and it is just a matter of priorities. It seems that you are never too busy to do something that seems important for you and your family.

"I do so much charity work at the office, even accept Medicaid and Medicare for which I get only partial payment, I feel that this is my volunteer work." This is another cop-out. It is a special privilege to help someone who is poor. You are in a unique position to help them with medical advice. It is expected in the medical profession that you will do some charity work and I personally do not consider that as volunteer work.

"I do all of my volunteer work at the church." This is a matter of personal attitude. I am very active in my church but I do not consider time there spent as volunteer work. I prefer to consider it as time owed to the church and I still feel that I need to be involved in the world outside the church.

Another frequently used "out" is the "I make a fair amount of contributions and I do not really have time to donate my time." This is another fallacy. In general, physicians are said to be fairly poor givers although there are, of course, some exceptions. But even if you do contribute financially that does not take the place of contributing your time and talents to community efforts.

The last excuse is "nobody asked me." This is not a very smart excuse. You can obviously get around this by volunteering.

Suggestions for Volunteering

There are many options for volunteering. One is to work with something that you are already expert in. For example, if you are interested in sports medicine, you might become the team physician. You can provide medical services at a local clinic for indigent patients.

Another option is to do something outside of your practice. This may well be more relaxing for you. Utilize or enlarge on a hobby. I often have been asked to bring along my camera to various events because of my interest in photography. It is fun to see your pictures published in various reports. Consider working in the community theater if you have any talents along that line. You could play the piano for the nursing home on Sunday morning.

You can learn something new by volunteering. Run for the school board or coach one of your kids in Little League. The possibilities are limited only by your imagination and your willingness to take a risk.

Be sure to pick something that interests you when deciding to volunteer. Budget your time. Back in the sixties, a friend of mine told me that he limited his volunteer efforts each year to one thing for his church, one for his profession, and one for his community. This plan could work for you. There may be times in your life when volunteer activities are inappropriate (for example, extensive time commitments during medical school days are not often practical). You cannot neglect your practice or your family. This is a balancing act with your time. Remember, some volunteer activities can be enjoyed with your spouse and family.

My last suggestion to you for volunteering is to be dependable. You need to be realistic about what you can do. I have turned down several opportunities for volunteer services simply because they met on Thursday at noon. There are just so many Thursdays at noon. You need to attend meetings and participate, or slide out gracefully. Do not be one of those who agrees to do everything and actually does nothing.

Value of the Physician as a Volunteer

Most nonprofit organizations are anxious to have a physician on their boards or committees. A physician brings intelligence to the group. Not that other people are not intelligent, but the fact that you have been able to weather the storm of premedical and medical education certainly puts you in a special category. Also, you are able to bring a medical perspective to nonmedical situations and decisions. You can point out the health effects of projects being considered.

Physicians bring prestige to a board or committee. Doctors are still held in high esteem as well trained, motivated individuals and the value of their time is well known. There is a general perception that "if he or she is involved, it must be a worthwhile cause." Being there helps recruit others. Everyone wants to be a part of a significant project or a winning team.

Another unique value of a physician is that only physicians can volunteer certain services such as holding well baby clinics, being a camp doctor, performing the football physicals or teaching house staff and medical students.

Challenge

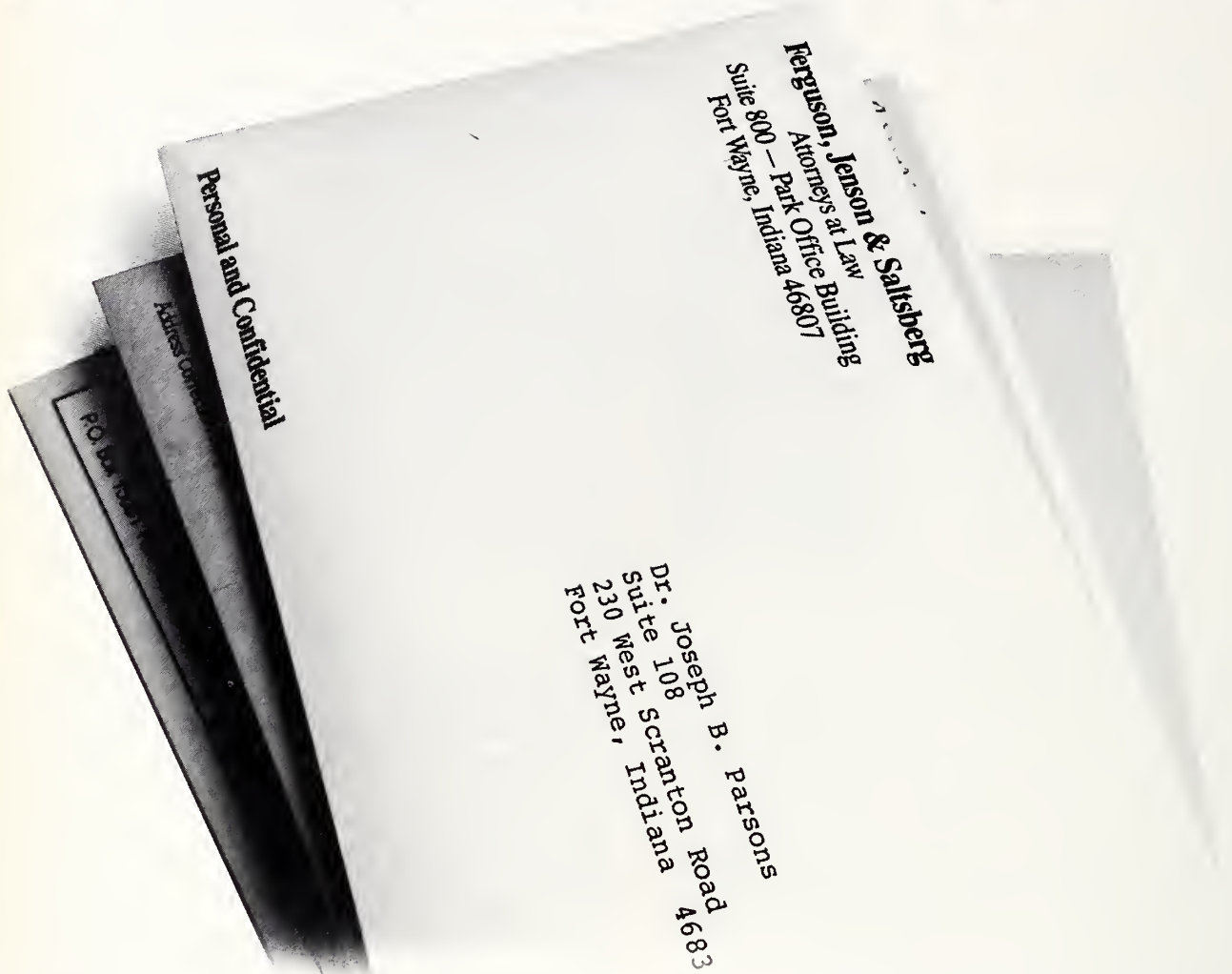
Once your eyes are open to the array of possibilities, you will see that there is much to be done and you are needed. Do not be afraid. Pick out something and go for it. You do not have to start a camp, be a part of one. Look for opportunities.

It is exciting to be entering the health care field. But you can triple your excitement with volunteer activities outside your practice. Somewhere in your community there is someone or something that needs you and wants your expertise and time. So I encourage you to step into the world of volunteerism with that special and unique gift that only you can give - your time. You will gain so much more than you can ever possibly give.

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Reversal of Pure Red Cell Aplasia by Cyclosporin-A in a Patient With Chronic Lymphocytic Leukemia

Ishmael S. Reid, M.D.*

Introduction

Pure red cell aplasia (PRCA) occurs infrequently in adult patients. When it does occur, it is usually secondary to neoplasms, particularly lymphoproliferative diseases, such as chronic lymphocytic leukemia, lymphoma, myeloma or Hodgkins disease. PRCA is defined as a profound anemia with reticulocyte counts of less than 0.5% in the absence of leukopenia or thrombocytopenia.¹ Our present understanding of this disorder holds that the inhibition of bone marrow red cell production is mediated through aberrant immune destruction of the late erythroid precursors. In vitro studies on affected patient bone marrows have revealed the RBC inhibition to be T-cell mediated.² In this article, we report a case of pure red cell aplasia occurring in a patient with typical B-cell chronic lymphocytic leukemia. The patient's anemia was transfusion dependent and unrelenting, despite aggressive treatment of his CLL. His disease remitted only after instituting therapy with cyclosporin-A.

Case Report

E.L., a 67-year old Caucasian, was initially seen in consultation in July, 1986, for evaluation of chronic lymphocytic leukemia. Physical examination revealed no adenopathy and no hepatosplenomegaly. Complete blood count results showed WBC 34,700/cmm with 84% lymphocytes and smudge cells on peripheral smear, hemoglobin 12.5 gm/dl, Hct 38.3% and platelets 146,000/cmm. Treatment was begun with daily prednisone. Therapy was tapered and discontinued in November, 1986, when WBC had decreased to 26,000/cmm. He

was seen again in April, 1987, and was doing well with WBC 26,300/cmm, 70% lymphocytes, Hgb 10.4 gm/dl, Hct 32.1% and platelets 210,000/cmm. In June, 1987, he was admitted to the hospital because of lethargy and shortness of breath secondary to profound anemia. His hemoglobin was 5.5 gm/dl, Hct 15.8%, WBC 22,000/cmm, reticulocyte counts 0.0 and 0.1% and platelets 216,000/cmm. Work up revealed a negative stool guaiac, normal barium enema and upper GI series and negative red cell antibody studies. Bone marrow aspiration and biopsy were hypercellular with few erythroid precursors and infiltration by sheets of mature lymphoid cells.

During the next nine months, the patient was transfusion dependent and received 54 units of packed red cells over that period. Despite treatment with cytoxan, oncovin and prednisone; cytoxan, oncovin, adriamycin and prednisone; and chlorambucil and decadron, his marrow remained hypoproliferative.

Repeat bone marrow done in January, 1988, revealed a decrease in the lymphocytic infiltrate but still contained only scant late RBC precursors. Despite apparent control of the patient's CLL as reflected by decreases in the total white cell count, he remained transfusion dependent. A diagnosis of pure red cell aplasia secondary to lymphoproliferative disease was entertained. A lymphocyte subset analysis by flow cytometry was ordered. The WBC was 6,600/cmm with 86% lymphocytes at the time. As expected, 78% of the lymphocytes proved to be B-cell in origin. Interestingly, the patient had a five-fold increase in the absolute number of circulating interleukin-2 receptor positive cells, 170/cmm. Although the absolute numbers of T4 and T8 cells were within normal range, the T4/T8 cell ratio was elevated at 3.0.

In February, 1988, in an attempt to decrease his transfusion requirements, he was started on cyclosporin-A 150

* Chief of Medicine and Director of Hematology/Oncology, Jefferson Regional Medical Center, Pine Bluff, Arkansas 71603.

FIGURE 1. Number of IL-2 receptor positive cells noted on subsequent lymphocyte subset analysis done after 90 days of cyclosporin-A therapy.

	Before Cy-A	After Cy-A	Normal Range
T4 Cells	851	890	370-1482*
T8 Cells	284	278	162-682*
T4/T8 Ratio	3.00	3.20	1.35-2.76
IL-2R (+) Cells	170	0	11-34*
*cells/cmm			

units p.o. bid (2.45 mg/kg/d). This resulted in a prompt cessation of transfusion dependency. His reticulocyte count increased to 5.1% and Hgb rose to 8.8 gm/dl. In March, 1988, cyclosporin-A was increased to 200 units bid (3.25 mg/kg/d) and Hgb rose to 9.5 gm/dl. By April, 1988, Hgb had reached 10.1 gm/dl on a continuing dose of 200 units bid. The patient has not required transfusion since institution of cyclosporin and has had no evident toxicity from the drug. Repeat lymphocyte subset analysis done after three months on cyclosporin-A revealed that the IL-2 receptor positive cells had completely disappeared from circulation. The T4/T8 cell ratio however remained elevated at 3.20.

Discussion

Cyclosporin-A is cyclic endecapeptide of fungal origin. It has the unique capability of inhibiting the T-helper cell aspect of the immune system and finds its greatest usefulness in preventing the rejection of transplanted tissue. Its exact mechanism of action appears to be a direct suppression of T-helper cell proliferation and a dramatic inhibition of interleukin-2 (TCGF) production.

This prevents the generation of cytotoxic T-cells and the differentiation to antibody secretion by B-cells. Interestingly cyclosporin-A has little effect on T-suppressor cells, as a consequence, its overall effect on the immune system favors T-suppressor cell domination and rejection of foreign tissue is averted.³ Adverse reactions due to cyclosporin-A include renal dysfunction, tremor, hirsutism, hypertension and gum hyperplasia.

In our patient, the lymphocyte subset analysis done prior to cyclosporin-A therapy suggested that his PRCA was possibly due to altered immune reactivity. The demonstrated five-fold increase in the number of circulating interleukin-2 receptor positive cells and the elevated T4/T8 cell ratio suggested a shift in the patient's immune response toward T-helper cell function. His dramatic response to low doses of cyclosporin-A would seem to support the contention that there was active immune suppression of his erythropoiesis. Of particular significance was the profound decrease in the number of IL-2 recep-

tor positive cells noted on subsequent lymphocyte subset analysis done after 90 days of cyclosporin-A therapy (Figure 1). It would seem logical to assume that this population of IL-2 responsive cells, being sustained by active production of IL-2 was responsible for the destruction of the marrow normoblasts. Once IL-2 production was halted by cyclosporin-A these IL-2 dependent cells rapidly disappeared from the circulation and normal erythropoiesis recovered. No previous reports on PRCA in chronic lymphocytic leukemia have measured IL-2 receptor positive cells in the circulation. The presence of IL-2 receptor positive cells may prove to be an accurate marker for those cases of PRCA which will respond to cyclosporin-A.

The only other case we could find in the literature on the therapeutic value of cyclosporin-A in the treatment of PRCA patient with CLL used doses in the 6-12 mg/kg/d range.⁴ This is also the dose range used to prevent transplant rejection. Our patient seems unique in that he responded to cyclosporin-A at a much lower dose 2.45-3.25 mg/kg/d. This may indicate that the T-helper cell inhibitory effect of cyclosporin-A can be achieved at a less toxic and more economic level than previously recognized. We regret that we did not obtain blood levels of cyclosporin-A in this patient.

Of interest is the fact that IL-2 receptors have also been found expressed on the surface of activated B-cells.⁵ This may explain why cyclosporin-A can cause a reduction in B-cell mass observed in the previously reported case of CLL-PRCA.⁴ Our patient has not been followed long enough to determine whether cyclosporin-A alone will control his CLL. Further immunologic studies to correlate return of normal erythropoiesis with changes in various T-cell and B-cell subset populations are pending.

In conclusion, adult PRCA is an immunologically mediated inhibition of normal erythropoiesis usually occurring in association with lymphoproliferative malignancies leading to a profound hypoproliferative anemia with transfusion dependency. The disorder, once apparent, may not respond to treatment of the underlying neoplasm. Cyclosporin-A, a new anti-transplant-rejection drug, seems to allow recovery of normal erythropoiesis in this disorder through inhibition of T-helper cell mediated immune responses.

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ELECTROCARDIOGRAM OF THE MONTH

Lam Ngo, M.D.
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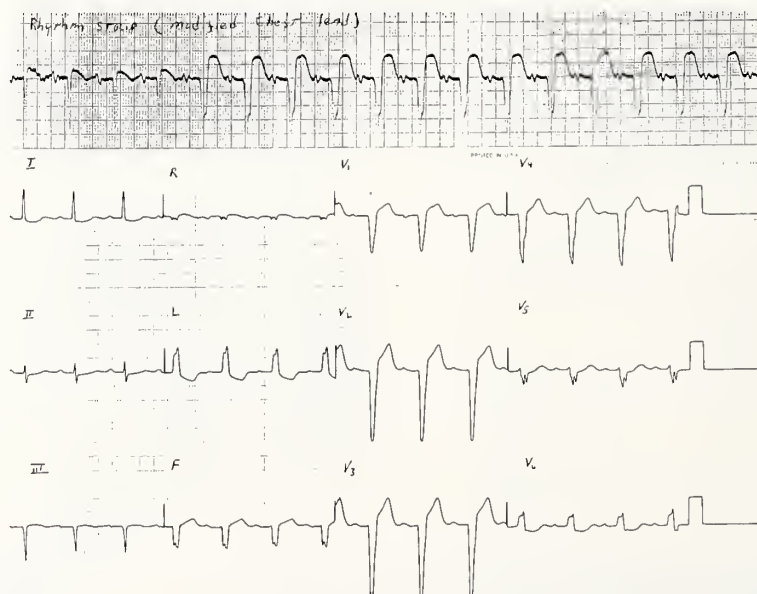
CLINICAL HISTORY:

M. A. is a 75-year-old white man with a history of 3 vessel coronary disease and stable angina. He was admitted to the hospital because of unstable angina and new onset atrial fibrillation which converted to normal sinus rhythm with digoxin. During monitoring, he developed a 15 beat run of ventricular tachycardia and was placed on procainamide after a proper loading dose. Shown here is a modified chest lead rhythm strip and a 12-lead ECG obtained early on the morning after commencement of procainamide therapy. How would you interpret this ECG?

DISCUSSION:

The first 4 beats on the rhythm strip are normal sinus beats with prolongation of the PR interval. This is followed by beats with a wide QRS complex with similar PR prolongation and an identical heart rate. The 12-lead ECG shows 3 normal sinus beats with borderline PR interval and normal QRS complexes followed by beats of wide QRS complex with first degree block and a LBBB pattern. The intermittent PR prolongation and left bundle branch block are probably secondary to procainamide therapy. This change resolved after discontinuation of procainamide. Thus, this trace stands as a potential instance of drug related LBBB and first degree heart block.

The feature editor wishes to thank Dr. Lam Ngo of the UAMS Division of Cardiology for his vast assistance with this month's ECG.



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Adenocarcinoid of Appendix

*C. Don Greenway, M.D.**, William E. Atkinson, M.D., Harriet A. Farley, LMSW,
Harold D. Langston, M.D., Lawrence A. Mendelsohn, M.D., Terrence A. Oddson, M.D.

Problem

A 46-year old woman presented with a previous diagnosis of adenocarcinoid of appendix (goblet cell type) with foci of extension involving the mesoappendix for a discussion of her treatment options.

Adenocarcinoid of appendix was diagnosed four weeks earlier when the patient had undergone a hysterectomy. She had had a history of chronic, abnormal uterine bleeding and increasing back pain for several years. She had previously had two dilatations and curettages (D & Cs), one in 1964 and another in 1982, which showed endometrial hyperplasia. Benign tissue has found in both D & Cs. Surgery including a hysterectomy was recommended at the time but the patient declined. She discontinued seeing a physician about her symptoms until last month at which time her physician again recommended a hysterectomy. At the time of the hysterectomy, a bilateral salpingo-oophorectomy was performed because of the apparent endometriosis of both ovaries. An appendectomy was also performed, and pathology confirmed adenocarcinoid of appendix.

The patient reported to the Second Opinion Panel that no follow-up therapy had been planned.

Pathology Review

Dr. Atkinson

A review of pathology revealed an adenocarcinoid of the appendix. The muscular wall was diffusely infiltrated by a tumor which consisted of rounded nests of cells with vacuolated cytoplasm and a goblet cell type appearance. Other areas showed more of a ribbony endocrine type tumor with nonvacuolated cells.

Grossly, the tumor covered an area at least 2 cm in diameter which penetrated through the serosa into the periappendiceal fat. In some areas invasion was accompanied by a desmoplastic reaction.

Carcinoid tumors less than 1 cm rarely metastasize; however, those greater than 2 cm nearly always do metastasize.¹⁻⁴ In addition, the likelihood of metastasis is much greater when there is penetration of the muscle wall. In a study of 39 patients with adenocarcinoid of the appendix, all six tumors that metastasized were of the goblet cell type.⁵

Diagnostic X-ray Review

Dr. Oddson

A chest x-ray and a cervical spine x-ray taken one week prior to surgery were normal. No abdomen imaging studies were available for evaluation. A CT scan of the abdomen is needed in order to determine the presence of metastatic disease.

Gastroenterology Opinion

Dr. Greenway

The five-year survival rate for goblet cell adenocarcinoid is 73 %.⁵ In this patient's case, there is a distinct possibility that the appendectomy was adequate curative treatment. However, there is a greater than 50% chance that the tumor will recur or that microscopic tumor still remains since her tumor was at least 2 cm in diameter and had penetrated the muscular wall. The treatment of choice for this patient is a right hemicolectomy. If the results are negative after appropriate chemical studies (5HIAA) have been done and a CT scan of the abdomen has been performed, a right hemicolectomy could be performed. If the tests are positive, the patient should be evaluated and treated for metastatic disease.

* St. Vincent Infirmary Cancer Center, St. Vincent Infirmary Medical Center, Two St. Vincent Circle, Little Rock, Arkansas.

Radiotherapy Opinion

Dr. Langston

Presently radiotherapy is not indicated for this patient. If recurrence and/or metastases should occur, palliative radiotherapy would be useful for relief of painful symptoms.

Medical Oncology Opinion

Dr. Mendelsohn

Without evidence of recurrence or metastases, chemotherapy is not indicated for this asymptomatic patient. However, chemotherapy could be used at a later time for palliative reasons. At this time, blood studies and a CT scan of the abdomen are needed. If the tests are negative, the optimal treatment for cure is a right hemicolectomy. Then the patient should be followed for recurrence.

Oncology Social Work Opinion

Ms. Farley

The patient's husband and children, who were present for the discussion, were supportive and apparently involved in the patient's decision-making processes. The patient initially was extremely hesitant to consider possible needs for additional treatment. The patient's primary issues from a social work perspective appeared to be a lack of knowledge of her disease and treatment options; difficulty making decisions and lack of confidence in her ability to do so; and denial regarding her disease and its possible significance. Through the discussions with the patient and her family, they were able to obtain needed information, engage in problem-solving and decision-making processes, and identify and confront

the denial that seemed to be a major contributor to the patient's stance.

Consensus

The panel agreed that most adenocarcinoids can be successfully treated by appendectomy. However, in this case, the panel felt there was a good chance that the disease would recur or metastasize since pathology revealed that the tumor was at least 2 cm in diameter and had already spread into the muscular wall. To rule out that metastatic disease had already occurred, the panel recommended that blood studies (5HIAA) be done and a CT scan of the abdomen be performed. If both tests are negative, the best curative treatment for this patient will be a right hemicolectomy. If metastatic disease is already present or if it should occur some time in the future after a hemicolectomy has been performed, the patient should be re-evaluated for radiotherapy and/or chemotherapy.

Acknowledgement

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Willis E. Brown, M.D. 1909-1969

*Richard B. Clark, M.D.**



Willis Ellsworth Brown was born in 1909, in Danville, Illinois. His parents were medical missionaries in China, and he spent a large part of his early life in that country, graduating from Shanghai American School in 1927. As a teenager he sometimes administered anesthesia to his father's Chinese patients while the elder Brown performed surgery. Brown returned to the United States and graduated from Albion College in Albion, Michigan, in 1931. He received his M.D. degree from the University of Michigan in 1934, and trained in Obstetrics and Gynecology at that institution, finishing in 1937. He remained on the faculty on the University of Michigan as an Instructor, subsequently accepting an appointment to the Obstetrics/Gynecology Faculty of the University of Nebraska in Omaha, where he served a brief period. Brown was certified by the American Board of Obstetrics and Gynecology in 1940 and was inducted into the American College of Surgeons in 1942. In 1943 he accepted a position at the University of Iowa where he attained the rank of Associate Professor. In 1949 he accepted the Chairmanship of Obstetrics/Gynecology at the University of Arkansas at the rank of Professor. He remained there until his death.

Until 1948 the Department of Obstetrics at the University of Arkansas was staffed by volunteers. Private practitioners devoted some time to teaching, but there were no full-time obstetricians or gynecologists (this was true in other clinical departments as well). Dr. Charles Henry was the last part-time head of the Department of

Obstetrics, and in 1948 he recruited Dr. Eugene T. Ellison to head the combined Departments of Obstetrics and Gynecology.¹ Dr. Ellison soon realized that he preferred private practice to academics, however, so he departed for Texarkana where he remains. Thus entered Dr. Brown.

The first Residency Program in Obstetrics/Gynecology in Arkansas was established by Dr. Brown. One of his first residents was Dr. Dean Wallace, who had a long and productive career as a Little Rock gynecologist. Soon there were four residents per year graduated. Approximately sixty-four residents engaged in their training during Brown's two decades to tenure; they now practice throughout the state and nation. Brown believed that Obstetrics/Gynecology was a Primary Care Specialty, a view that was shared by many.

Dr. Brown had an intense interest in the design and construction of the new Medical Center which was being built on West Markham in the early 1950's. The opportunity to participate in such design work was, in fact, a major drawing point which led him to the University of Arkansas. During the construction phase of the new campus on West Markham Street, he religiously attended church on Sunday and then, just as religiously, carried the whole family out to the hill: first, to pace about and observe the architects surveying, later to gaze into the depths of the excavation and ponder whether or not "they're going to build a new hospital or simply try to find one" and, finally, to walk amongst the floors as the construction progressed, checking doorways, widths of halls, and various other details that were drawn into the design of the obstetrical unit. He was very proud of the provisions for "rooming in."²

* Department of Anesthesiology, University of Arkansas for Medical Sciences, 4301 West Markham, Slot 515, Little Rock, Arkansas 72205.

Dr. Brown was also avidly interested in teaching medical students. Students rotated through Obstetrics and Gynecology twice - first as juniors (in the outpatient clinics) and then as seniors (in the labor and delivery areas, in the operating rooms, and on the wards.) The senior rotation was virtually the equivalent of an internship, with a great deal of hands-on experience in obstetric delivery, administration of regional anesthesia, forceps application, and surgical procedures. Approximately, 1,610 students were educated by Dr. Brown during his Chairmanship.

Willis Brown recruited a small but bright faculty. Funding was always a problem. The Chief Residents doubled as Instructors. Faculty members of the Department over the years included Drs. Eva Dodge, Clarence Sutherland, John Nettles, Kermit Krantz, Stewart Fish, Byron Hawks, Stacy Stephens, and this writer. Brown was a warm person, but never permitted any of his faculty to outshine him. It is significant that two faculty members, Krantz and Fish, both progressed from Assistant Professor at Arkansas to full Professor and Chairman of other Departments - Krantz to Kansas and Fish at Tennessee.

Brown was a stern, but loving father figure to his students and residents. More than one marriage was salvaged because of his efforts.

Dr. Brown headed specialists' sections of the American Medical Association, Southern Medical Association, and the American Society for the Study of Sterility. He served as an examiner on the American Board of Obstetrics and Gynecology. He was a member of the Advisory Committee to the Children's Bureau of the Department of Health, Education and Welfare. Dr. Brown was active in medical journalism and served on the editorial boards

of four professional periodicals. More than one hundred twenty-five of his articles were published in scientific journals. One article "The Genealogy of the Medical Center" is maintained in the University of Arkansas for Medical Sciences Library as a historical reference on Arkansas medical education.³

Dr. Brown was a member of the Association of Professors of Gynecology and Obstetrics, Society for Gynecological Investigation, American Gynecological Society, and Central Association of Obstetricians and Gynecologists. He was a Founding Fellow of the American College of Obstetricians and Gynecologists and was the national President at the time of his death.

Dr. Brown's health began declining in the early 1960's when the first of a series of myocardial infarctions occurred. Shortly before his death his former residents took up a collection and bought for him a new Buick, which bore the license plate (ACOG 1) honoring his Presidency.

He passed away January 9, 1969, in University Hospital of a myocardial infarction and was interred in Mt. Holly Cemetery. He was survived by his wife, Dorothy Anderson Brown, and by two sons, Dr. Willis E. Brown, Jr., a neurosurgeon, and Dr. Robert M. Brown, a theoretical physicist. His legacy was the many students, residents, and practitioners he inspired and influenced.

References

1. Clark RB. Chapter 12, "Department of Obstetrics/Gynecology" in *Historical Perspectives: The College of Medicine at the Sesqui-centennial*. Edited by Baker ML.
2. Brown Willis E., Jr. Personal Communication.
3. Obituary. *Journal of the Arkansas Medical Society* February 1969; 65(9):348.

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THINGS TO COME

NOVEMBER 27-DECEMBER 2

Seventy-fourth Scientific Assembly and Annual Meeting of the Radiological Society of North America. Sponsored by RSNA. McCormick Place, Chicago. For further information contact, RSNA, 1415 W. 22nd Street, Tower B; Oak Brook, IL 60521; (301) 571-2670.

DECEMBER 13-15

Advanced Trauma Life Support. Sponsored by the University of Kentucky. University of Kentucky, College of Medicine, Lexington, KY. AMA category I credit available. For further information, call Joy Greene, (606) 233-5161.

DECEMBER 13 - 15

Advanced Trauma Life Support. Sponsored by the University of Kentucky, College of Medicine. Lexington,

KY. AMA Category I credit available. For further information, call Joy Greene, (606) 233-5161.

DECEMBER 16 - 17

Vascular Surgery Update. Sponsored by the University of Kentucky, College of Medicine. Hyatt Regency Hotel, Lexington, KY. AMA Category I credit available. For further information, call Joy Greene, (606) 233-5161.

DECEMBER 16 - 18

Pediatric Update. Sponsored by the American Academy of Pediatrics. Williamsburg Hilton, Williamsburg, VA. 16 AMA Category I credit hours available. Fees: AAP Resident or Candidate Fellow, \$220; AAP Fellow, \$300.00; Non-member, \$365.00; Allied Health Professional, \$220.00. Further information, American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, IL 60009-0927; 1-800-433-9016.

KEEPING UP

Cholesterol: Current Concepts for Physicians

Self-Study Course for Physicians. Sponsored by the National Health, Lung and Blood Institute. A national cholesterol education program is available through the Arkansas Medical Society office in which a physician studies at home. Two hours Category I credit. Further information: David Wroten, Arkansas Medical Society, P. O. Box 5776, Little Rock, AR 72215; (501) 224-8967.

Patient Information and Education

November 22, 12:30 p.m. Presented by Charles Marsh, Pharm.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Contraception

December 6, 12:30 p.m. Presented by Charles March, Pharm.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Newborn Infections

December 7, 12:00 noon. Presented by Bonnie Taylor, M.D. Sponsored by AHEC - Fort Smith. Sparks Regional Medical Center. One Category I credit hour.

Internal Medicine Conference

December 13, 12:30 p.m. Presented by Larry Price, M.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Family Assessment Models

December 14, 12:30 p.m. Presented by Russell Williams, M.S.W. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Weight Loss

December 15, 12:30 p.m. Presented by Ginger Ogle, R.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Internal Medicine

January 10, 1989, 12:30 p.m. Presented by L.C. Price, M.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Tumor Conference

January 17, 1989, 12:00 noon. Presented by Terry Holt, M.D. Sponsored by AHEC - Fort Smith. Seventh Floor Dining Room, Sparks Regional Medical Center. One Category I credit hour.

Recurring Education Programs

As organizations accredited for continuing medical education by the Arkansas Medical Society, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), each Friday, 12:15 p.m., Conference Room, Building 1, VAMC
Mortality/Morbidity Conference, fourth Wednesday, 2:45 p.m., Conference Room, Building 1, VAMC

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon, varying topics, alternating Fridays, 12:30 p.m., Classrooms, AMI National Park Medical Center

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Second Floor Classroom
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Sturgis Building, Rooms S120-121
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium0
Cancer Conference, third and fourth Thursday, 12:00 noon, Room S1174K, Lab
General Medicine Journal Club, each Tuesday, 12:00 noon, Petit Jean Room
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Arkla Room
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory
Pediatric Conference, first Tuesday, 12:30 p.m., Maumelle Room
Peripheral Vascular Disease Conference, fourth Tuesday, 6:00 p.m., Arkla Room
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, Southwestern Bell/Arkla Rooms

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and case presentations
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES - LITTLE ROCK

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Conference Series, times and dates vary, UAMS Education Building, Room G/110 A&B
Anesthesia Morbidity and Mortality Conference, every second and fourth Tuesday, 6:45 a.m., UAMS Education Building, Room G/110 A&B. Every first, second and third Thursday, 4:00 p.m., Room G/112 A&B.
Child Psychiatry Clinical Case Conference, first Friday, 1:00 p.m., UAMS Child Study Center Conference Room.
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium
Medicine Research Conference, each Wednesday, 4:30 p.m. Shorey Building, Room 3506
Neurology Clinical Case Conference, three or four Thursdays per month, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.

Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (7D33) and LRVAMC (Autopsy Room).
Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7D33.
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Basic Science Conference, occasional Tuesdays, 11:00 a.m., UAMS Education Bldg., Room B/135.
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds/Clinical Case Conference, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building, Room 159
Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Morbidity and Mortality Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A.
Surgery Resident Case Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A
Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Conference, last Wednesday, 5:00 p.m., UAMS
Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS
VA Diagnostic Imaging Conference, every Tuesday, Wednesday and Thursday, 8:00 a.m., LRVA Nuclear Medicine Conference Room, Room 1D173
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., NLRVA, Building 66, Room 38
VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., NLRVA Building 89, Conference Room, or Arkansas Rehab Institute
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Surgery Service General Chest Topics (Combined Surgery/Medicine Lung Conference), every other Monday, 12:15 p.m., LRVA, Room 2D109.
VA Surgery Service Lung Cancer Conference, every Tuesday, 3:00 p.m., LRVA, Room 2E142.
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Tumor Conference, each Tuesday, 1:00 p.m., VAMC, Room 2D109

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pediatric Conference, third Friday, 12:15 p.m., Union Medical Center.
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital
Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, every four months, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, MO
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pochontas
Neurological-Neurosurgical Conference, first Monday, 12:00 noon, St. Bernard's Dietary Conference Room
Neuroradiology Conference, second Friday, 12:00 noon, St. Bernard's Dietary Conference Room
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Wynne Tumor Conference, third Tuesday, 6:00 p.m., Grecian Steak House, Wynne, every four months.

PINE BLUFF-AHEC

Behavioral Science Conference, first and third Thursday, 12:30 p.m., Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, first and fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Geriatrics Conference, third Friday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center

Orthopedic Case Conference, second and fourth Thursday, 12:30 p.m., Jefferson Regional Medical Center.
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, fourth Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Surgery Conference, first Friday, 12:30 p.m., Jefferson Regional Medical Center
Tumor Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Cardiology Conference, alternating Fridays, 11:30 a.m., St. Michael Hospital
Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital.
Cine Radiology, second Friday, 12:00 noon, Wadley Regional Medical Center.
Echo-Cardiology, fourth Friday, 12:00 noon, Wadley Regional Medical Center
Internal Medicine Conference, second Tuesday, 12:00 noon, St. Michael Hospital
Neuro-Radiology Conference, second and fourth Wednesday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Surgeons and Pathologists Conference, second Thursday, 7:00 a.m. breakfast, Wadley Regional Medical Center
AHEC Tumor Conference, first Wednesday, 7:00 a.m. breakfast, St. Michael Hospital

AMS NEWSMAKERS

Dr. and Mrs. Jacinto A. Hernandez, residents of West Memphis, became U. S. citizens recently. The nephrology specialist and his wife took the oath in ceremonies at Federal District Court at Jonesboro. They have been residents of the United States for thirteen years. Dr. Hernandez also recently passed the American Board of Internal Medicine's geriatric medicine exam and is a certified Diplomate in Geriatric Medicine.

Dr. Paul Irvin Wills, a Fort Smith otolaryngologist, was elected to his second term as secretary of the Board of Governors of the American Academy of Otolaryngology-Head and Neck Surgery. Dr. Wills practices at the Western Arkansas Ear, Nose and Throat Clinic and has served as chief of staff at Sparks Regional Medical Center.

The Arkansas Trial Lawyers Association recognized **Henrik Madsen, M.D.**, for his contribution to improved medical documentation for use in the judicial system. Dr. Madsen helped define thermography as a proof of injury after an accident. He specializes in physical medicine rehabilitation.

The first Arkansan to receive the American College of Radiology Gold Medal is **Dr. Joseph D. Calhoun**, a Little Rock radiologist. Dr. Calhoun was chosen over 20,000 potential awardees for his "extraordinary service" to the practice of radiology. Past recipients include Dr. W. D. Coolidge, who developed the X-ray tube and Madame Marie Curie, discoverer of radium.

Carl T. Beck, M.D., has been named a Fellow of the American Academy of Family Physicians. Dr. Beck practices in Mountain View.

One Arkansas physician, **Frank C. Miller, M.D.**, was named in the *Good Housekeeping* magazine's list of "The 107 Best Doctors for Women" in October. Dr. Miller is the chief of staff the University Hospital and specializes in high-risk pregnancies. He is chairman of the UAMS department of Obstetrics and Gynecology.

Dr. Charles M. McClain, Jr., a Batesville radiologist, was named as a Fellow of the American College of Radiology. Another physician named Fellow of the ACR was **Dr. Jerry C. Holton**. Dr. Holton practices in Little Rock.

The Glenwood Medical Clinic honored Dr. Harold Short recently by displaying his portrait and hosting a building dedication ceremony in the clinic's lobby. The Texarkana native was instrumental in establishing the medical clinic and the AMI Medical Arts Building before his death in January, 1988.

Robert C. Landgren, M.D., was named CARTI chief of staff recently. Dr. Landgren, who has been with CARTI since 1982, practices therapeutic radiology.

Holt-Krock Clinic in Fort Smith has been awarded the highest certificate of accreditation by the Accreditation Association for the Ambulatory Health Care, Inc. The three-year certificate indicates that the clinic has met nationally recognized standards for health care. There is only one other clinic in the state which has the same level of accreditation.

Robert L. Hill, M.D., a Hot Springs general surgeon, presented the Arkansas Cancer Research Center with a \$15,000 grant to be used in the Ottenheimer Cancer

Teaching Center. The grant will be used to develop a video program and teaching module to inform health professionals of the services and programs provided by the American Cancer Society.

Gastor B. Owens, M.D., was roasted by the citizens of Morrilton during a fundraiser for the Friends of the Morrilton/Conway County Library. Dr. Owens has been the Morrilton football team physician for 37 years. He began his practice in Morrilton in 1951 and only recently retired.

The Mental Health Institute in Hot Springs awarded **Dr. Thomas E. Townsend** a community service award in recognition of his 24 years of service as a member of the Southeast Arkansas Mental Health Center's Board of Directors. Dr. Townsend is a pediatrician.

Thomas P. "Paul" Thompson, Jr., M.D., recently completed a workshop on advanced gynecologic surgery lasers in Nashville, TN. Dr. Thompson has been practicing obstetrics and gynecology in Hot Springs for 18 years.

William Golden, M.D., director and assistant professor in the division of General Medicine and Ambulatory Care at the University of Arkansas for Medical Sciences, was recently certified as a Diplomate in Geriatric Medicine. The certification recognized his expertise in the field by the American Board of Internal Medicine and the American Academy of Family Physicians.

Dr. John E. Bell, Second District Councilor of the Arkansas Medical Society and a Searcy radiologist, was named a Fellow of the American College of Radiology at the ACR annual meeting in Cincinnati, Ohio.

NEW MEMBERS

PULASKI COUNTY MEDICAL SOCIETY

Budhraj, Madhu S., Endocrinology, Little Rock. Born September 4, 1950, India. Pre-medical education, S. D. College, Simla, India, 1967. Medical education, All India Institute of Medical Sciences, New Dehli, India, 1973. Internship/residency, Jewish Hospital and Medical Center, Brooklyn NY. Fellowship, University of Cincinnati, Ohio, Endocrinology. Board certified, Medicine and Endocrinology.

Deer III, Philip J., Ophthalmology, Little Rock. Born October 24, 1958, Memphis, TN. Pre-medical education, Hendrix College, Conway, AR, B.A., 1981. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/residency, University of Mississippi, Jackson, MS.

Frazier, Cynthia N., Obstetrics/Gynecology, Little Rock. Born February 26, 1953, Fort Smith, AR. Pre-medical education, University of Arkansas, B.S., 1976. Medical education, University of Arkansas for Medical Sciences, 1982. Internship/residency, UAMS. Board eligible, Ob/Gyn.

Jones, Kathleen C., Gynecology, Little Rock. Born April 4, 1922, Pernambuco, Brazil. Pre-medical education, Waco, TX, B.A., 1943. Medical education Southwestern Medical College, University of Texas, 1947. Residency, Baptist Memorial Hospital, San Antonio and St. Paul's Hospital, Dallas, TX. Internship, Baylor Hospital, Dallas, TX. Practice experience, Bediri Baptist Hospital, Java Indonesia, 33 years; Dufner Clinic, San Antonio, 3 years. Member, Bexar County (TX) Medical Society.

McDonald, William G., Emergency Medicine, Little Rock. Born November 22, 1945, Ripley, MS. Pre-medical education, Delta State University, Cleveland, MS, B.S., 1967. Medical education, Southwestern Medical School, Dallas, , 1978. Internship/residency, Southwestern Medical School. Practice experience, Jefferson Davis Memorial Hospital, Natchez, MS, 4 years; St. Dominic Hospital, Jackson, M.S., 3 years. Board certified, Family Practice and Emergency Medicine.

SEBASTIAN COUNTY MEDICAL SOCIETY

Gamble, Cory L. (D.O.), Endocrinology and Internal Medicine. Born December 22, 1955, Tulsa, OK. Pre-medical education, University of Oklahoma, B.A., 1979. Medical education, Oklahoma College of Osteopathic Medicine and Surgery, 1982. Internship, Oklahoma College of Osteopathic Medicine and Surgery. Residency, Doctor's Hospital, Columbus, Ohio; Oklahoma College of Osteopathic Medicine and Surgery. Fellowship, University of Oklahoma Health Sciences Center, Oklahoma City. Board eligible, Internal Medicine and Endocrinology. Member, Oklahoma Endocrine Society.

Resident Section

Langston, Thomas A., Family Practice. Born February 16, 1962, Harrison, AR. Pre-medical education, University of Arkansas, Fayetteville, B.S., 1984. Medical education, UAMS, 1987. Internship, UAMS/AHEC-NW, Fayetteville.

IN MEMORIAM

DR. JAROSLAV PANUSKA

Jaroslav "Jerry" Panuska, M.D, an anesthesiologist for St. Joseph's Regional Health Center, died September 27, 1988. He was 41.

Dr. Panuska was born in Czechoslovakia but been a resident of Hot Springs for 20 years. He was a Vietnam veteran and a member of the Westminster Presbyterian

Church. He was a member of the Garland County and the Arkansas Medical Societies.

Dr. Panuska is survived by his parents, Mr. and Mrs. Ondrej Panuska; a brother, Milan Panuska; and a twin sister, Alexandria Saca Panuska, all of Prague. He is also survived by an aunt, Josephina Frelich of Hot Springs.

DR. E. FRANK REED

E. Frank Reed, M.D., a retired Pine Bluff orthopedist and former Jefferson County coroner, died October 23, 1988. He was 70.

Dr. Reed, who began his practice in 1947, served as Jefferson County coroner for 30 years until his retirement in 1971. He was a Navy commander during World War II and the Korean War.

He was a member of the Jefferson County and Arkansas Medical Societies as well as the International As-

sociation of Coroners and Medical Examiners. He was a member of the Pine Bluff Rotary Club and the Retired Officers Association. Dr. Reed was active in the Masons, Sahara Shrine Temple, Arkansas Consistory of Scottish Rite Bodies and the Order of the Eastern Star.

Dr. Reed is survived by his wife, Martha M. Herren Reed; four sons, E. Frank Reed III and John L. Reed of Pine Bluff, Tom Reed of Whitehall and Jerry Reed of Little Rock, and 12 grandchildren.

*Memorials honoring Arkansas Medical Society members and their families
can be made to the Medical Education Foundation for Arkansas (MEFFA),
Post Office Box 5776, Little Rock, Arkansas 72215.*

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Business Manager

Myringotomy with Ventilation Tubes: Study of 1,000 Children

Joe B. Colclasure, M.D., and Sharon S. Graham, M.A.

Introduction

Otitis media is one of the most common childhood diseases treated by physicians who care for children. It has been estimated that 10 million children a year require treatment for this disease in the United States alone, and of these, approximately 1 million eventually require myringotomy.¹ One study in Boston² indicated that by three years of age, 71% of 2,500 children had at least one episode of acute otitis media, and one third of these experienced three or more episodes. Infants between the ages of six months and thirty-six months and children between the ages of four and six are most at risk for acute disease, with the incidence dropping off greatly after age eight. As a general rule, the younger the age at the time of the first episode, the more potential for recurrence of attacks. Approximately 50% of the children who have otitis media once before age twelve months will have at least three episodes of this problem before age three.³

History

Many factors have been suggested as contributing to the development of otitis media in children. Eustachian tube dysfunction is thought to be the most common predisposing cause in otitis media. Marginal eustachian tube insufficiency secondary to scarring or stenosis may be present. Adenoid hypertrophy frequently produces obstruction as well. Indeed, some studies indicate that removal of the adenoids, alone or with myringotomy, may reduce the recurrence rate of otitis media by 50%.⁴ Contamination of the middle ear by bacterial organisms from upper respiratory infection may be another cause of otitis media. Immunological and allergic disorders may also contribute to the incidence of otitis media. Sinusitis is an additional cause. Children with congenital disorders including cleft palate and Down's syndrome are also more susceptible.

Otitis media seems to be more prevalent in some families and has a higher incidence in males than females. Race also plays a role, possibly because of differences in the skull characteristics that contribute to eustachian tube differences. There is a high prevalence of acute otitis media in American Indian population and also in Hispanic children. Socioeconomic status has also been suggested to be a factor.

Treatment of Otitis Media

The only mode of treatment which is widely accepted is antibiotic therapy. Amoxicillin, a combination of erythromycin and sulfa, cefaclor and trimethoprim-sulfamethoxazole are the antibiotics of choice. *H. influenzae* and *Streptococcus pneumoniae* are the two organisms most frequently identified. However, some studies have shown that as many as one third to one half of infected ears which are cultured show no pathogen present.⁵ The use of antibiotics is thought to decrease the duration and incidence of further complications. There is no question that the use of antibiotics has significantly reduced the incidence of severe complications.

When otitis media with effusion develops secondarily, long-term low dose antibiotics may be recommended. Antihistamines and decongestants are of questionable benefit and may reduce the mucociliary transport system of the middle ear.⁶ However, these indications may have some role in diagnosis of children with significant allergic disorders. The role of short-term corticosteroid treatment remains controversial. Long-term treatment is not indicated due to the related side effects.

Myringotomy with insertion of a ventilation tube may be indicated in either chronic or recurrent acute disease of the middle ear. The most common indication is chronic serous otitis media (fluid in the middle ear for three months which is not responsive to medical treatment). The second most common indication is recurrent acute otitis media with or without associated serous otitis media. It has been well-demonstrated that the morbidity of recurrent otitis media is dramatically reduced with the use of ventilation tubes.⁷

The Ear Nose-Throat Clinic, P.A., 1200 Medical Towers Building,
9601 Lile Drive, Little Rock, Arkansas 72205-6358.

Other indications include: chronic adhesive otitis; atelectasis or retraction pocket development; persistent conductive hearing loss, vertigo, balance problems or tinnitus in the presence of otitis media; and pattern eustachian tube disorder.

The use of myringotomy with insertion of a ventilation tube is used in part as a preventative measure. In addition to relieving immediate symptoms of pain or pressure in the ear and conductive hearing loss, tympanostomy tubes serve other functions. Incontrovertible evidence has demonstrated their ability to reverse the formation of a retraction pocket of the tympanic membrane - which may prevent the development of cholesteatoma. Tubes also serve to prevent spontaneous perforations. They may aid in preventing middle ear scarring and chronic adhesive otitis media. Paparella has done a number of studies showing the correlation between otitis media with effusion and the development of sensorineural (permanent nerve type) hearing loss.⁸ Animal studies have suggested that viral and bacterial toxins from the effusion may cross the round window membrane and enter the inner ear, resulting in permanent sensorineural hearing loss.⁹

Several studies have addressed the effects of long-term otitis media in children and its relationship to the development of learning disorders and delayed language development.¹⁰ While some may consider this evidence controversial, it does seem logical to assume that children who have a long-term conductive hearing loss over months or years during the important developmental years for speech and language are at considerable disadvantage in the learning situation.

While tympanostomy tubes have established their effectiveness in relieving symptoms and in preventing the development of chronic disease or other complications, problems may occur with their use. The most common problem is postoperative otorrhea. Other reported complications include persistence of tympanic membrane perforations, migration of PE tube to the middle ear, tympanosclerosis, cholesteatoma, tympanic membrane weakness and retraction. Repeated myringotomy and tubes may be required for persistent disease.

Study Design

The purpose of the study was to evaluate the rate of complications of children undergoing myringotomy. The charts of 1,000 children undergoing myringotomy with insertion of ventilation tubes were reviewed. The 1,000 cases were consecutively performed from 1985 through 1987. Information obtained from each chart included the sex and age of the child; the type of secretion found at surgery; the type of ventilation tube used; the presence and degree of preoperative hearing loss; number of repeated myringotomies required; diagnosis, if other than otitis media; the occurrence of postoperative otorrhea; premature extrusion of tubes; and other complications such as perforation or cholesteatoma. The surgical procedures were performed by five otolaryngologists in the clinic outpatient surgery center.

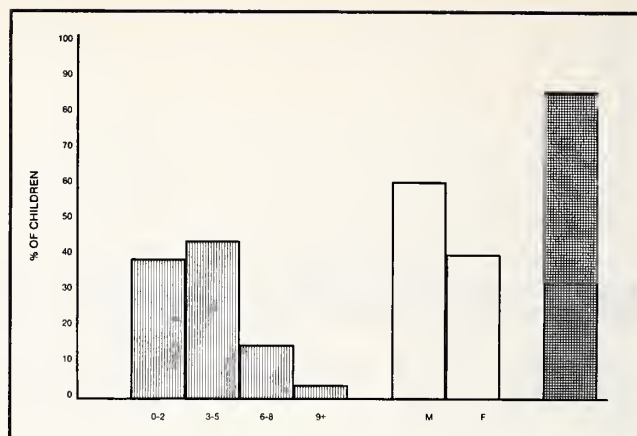


Figure 1. Age, Sex and Associated Hearing Loss.

Of the 1,000 cases, 598 were boys (60%) and 402 (40%) were girls. This data supports the commonly acknowledged proclivity of males for development of otitis media. Three hundred and eighty children (38%) were 35 months old or less; 438 (44%) ranged from three to five years of age, 148 (15%) were six to eight years old, and 34 (3%) were nine years of age and older (Figure 1).

Thirty percent of the children showed serous effusion at surgery and an additional 50% had mucoid fluid. Nine percent showed suppurative disease and 11% has no fluid present at the time of surgery (Figure 2).

Because patients of five different otolaryngologists were included in the study, a wide range of different types of ventilation tubes were used. Choice of ventilation tube is based on physician preference for tube design; selection is strongly influenced by how long the physician wishes the tube to remain in place. Tubes included in this study included the standard polyethylene, stainless steel, or Reuter-Bobbin, Paparella types I and II, flanged teflon, triflange tubes, "T" tubes, and gold tubes. Of the 1,000 children reviewed in this study, 98% had myringotomy with tube insertion in both ears at the time of the initial procedure, for a total of 1,967 myringotomies.

Hearing loss of 20 decibels or greater was present in 86% of children age three and older (533 children) in whom hearing was tested pre- and post-operatively (Figure 1). The hearing losses ranged from 20-50 decibels with a mean threshold of 27 decibels. Although a mean threshold was determined, there is no true mean threshold in otitis media, as hearing loss varies from moment to moment depending on the amount and viscosity of fluid and the amount of air present behind the tympanic membrane.

Results

In the 1,000 children studied, the most common problem was postoperative otorrhea. The occurrence of ear drainage was divided into the immediate post-operative period (within the first two weeks) and drainage occurring after two weeks post-operatively. As seen in Figure 3, 285 children experienced some otorrhea; 85 (8%) had drainage within the first

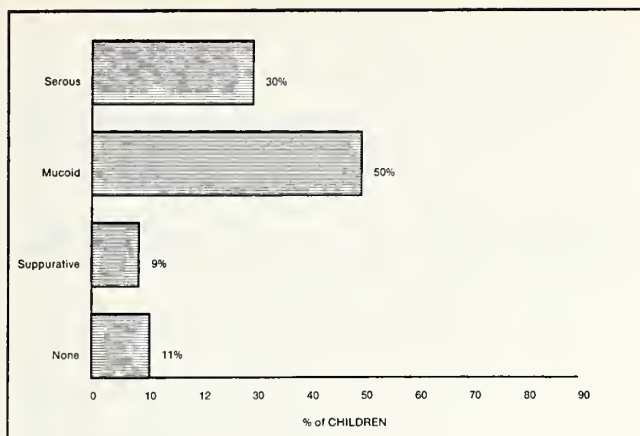


Figure 2. Types of Effusion.

two weeks and 200 (20%) has one or more episodes of drainage after two weeks. These figures for the occurrence of otorrhea are similar to figures reported by other studies, which have reported incidences ranging from 15 to 35%.¹¹

Reasons for the development of otorrhea are unclear; they may include infection present at the time of intubation; introduction of water into the middle ear through the tubes; further effusive disease development in the middle ear; and development of a generalized upper respiratory infection. Most cases are felt to be related to persistent or recurrent middle ear infection. Morbidity related to otorrhea is usually mild. Treatment with antibiotic otic drops usually resolves infection. Systemic antibiotics are occasionally required.

One hundred forty-seven (15%) required a second procedure, while 42 children (4%) had three procedures and 20 children (2%) has four or more myringotomies at different times. It is this group of children whose primary middle ear or eustachian tube disease is most severe. These children are most at risk for developing persistent middle ear sequelae, permanent hearing loss, and cholesteatoma. None of these sequelae occurred in these children requiring multiple PE tube insertions. PE tubes designed to remain in the tympanic membrane for prolonged periods are available. Unfortunately, the incidence of complications is increased with the use of PE tubes, especially persistent post-intubation tympanic membrane perforations.

In addition to recurrent disease, another potential reason for a second and third procedure is premature extrusion of the tube. In this study, seven children experienced premature extrusion within the first two weeks. Twenty-four children has a tube extrude after the first two weeks and up to three months post-operatively (Figure 3). Combined, this represents approximately 3% of the 1,000 children. Only those children with recurrence of disease required replacement of the PE tubes. Occasionally, it is possible to replace PE tubes in the office.

While post-operative otorrhea, premature extrusion and the need for repeated procedures may occur, they generally do not result in any serious sequelae. There are, however, some more significant problems which should be considered

with the use of tympanostomy tubes. Persistent perforation is one complication which has been reported in most studies of tympanostomy tubes. The reported incidences have varied from 0.5% to 2%.¹² In this our study, six children (0.6%) had persistent perforations; the perforations healed spontaneously in two children and did not require surgery. In the remaining four children (0.4%) a tympanoplasty Type I was required to graft the open area in the drum (Figure 3). All four children who were reoperated had no further complications and did have normal appearing middle ears and normal hearing post-operatively. There did not appear to be a correlation between the occurrence of persistent perforation and the type of tube used.

The development of cholesteatoma has also been suggested to be a potential risk involved with the use of tympanostomy tubes. In this study, there was no cholesteatoma development subsequent to the use of tympanostomy tubes. Generally, microscopic examinations post-operatively allow for routine follow-up which can prevent the development of cholesteatoma by identifying the presence of retraction pockets and treating them before the problem becomes more serious. Other large studies have reported an incidence of less than 1% cholesteatoma with the use of tympanostomy tubes.¹³ In fact, the authors consider the use of PE tubes as a means of preventing cholesteatoma.

Two children continued to show significant conductive hearing loss post-operatively, and may be considered for future exploratory (tympanoplasty or stapedectomy) procedures, once normal eustachian tube function is assured. Both children have forms of mixed congenital hearing loss, so that the conductive loss was present before otitis media occurred. There was no incidence of post-operative sensorineural hearing loss.

In this series there was no incidence of medial migration of a tube into the tympanic cavity. This is a complication which has been reported in other studies as occurring in 0.1% of the cases.¹⁴ Unless evidence of hearing loss or infection ensues, treatment is usually observation only.

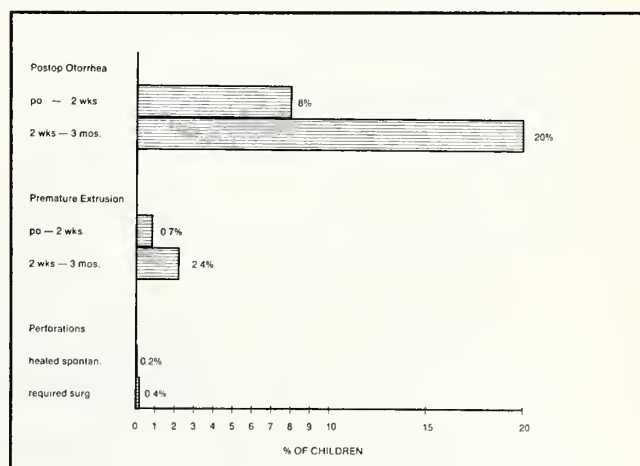


Figure 3. Associated Complications.

Summary

Infections and/or effusive disease of the middle ear which are uncontrolled by medical management present a difficult dilemma for the physician, parents and child. Myringotomies with insertion of ventilation tubes can dramatically reduce the morbidity associated with recurrent otitis media. This study demonstrates that tube insertion reverses the hearing loss associated with middle ear effusion. The study also supports the use of tubes in the prevention of ossicular erosion and disruption, adhesions, cholesteatoma, and permanent hearing loss. Ventilation tube insertion is a valuable method of treatment, which has minimal complications, and effectively controls most serious sequelae of childhood middle ear disease.

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EDITORIAL

Pediatrics in the Nineties

Robert H. Fiser, M.D.
Guest Editor



The moral test of government is how it treats those in the dawn of life, the children; those who are in the twilight of life, the aged; and those who are in the shadows of life, the sick, the needy and the handicapped."

Hubert Humphrey

Remembering that the government is the people, it's interesting to look at the results of some recent health care polls. Over 50% of Americans polled feel that we are spending too little on health care today. Only 12% think we are spending too much. Most Americans feel even stronger about spending more health care dollars for the elderly. This is a concern of those whose interests are primarily in Pediatrics because 35% of the total health dollar is already allocated to 15%, the elderly; whereas 15% is allocated for 35%, the children. In regard to satisfaction of various services, polled Americans rate airlines ahead of hospital care. I think this is because most people have an unrealistic expectation of cures. It's very important that we, the medical community, be aware of these and other public feelings and attitudes so we can better plan where we are going in the future. These perceptions of people have affected malpractice, social programs and subsequently, reimbursement, which eventually affects everyone.

We must adjust our preventive periscope. We know that the majority of people in prisons have been sexually abused as children. We are not sure what other early behavioral influences have led to major burdens that we have not yet addressed. An editorial in the *New York Times* suggested that preschool was too late for intervention and that, by age three, children may have already developed habits, interests, or concerns about education and life that are too late to correct by the time they enter preschool. We build institutions for the mentally retarded, the handicapped and juveniles in trouble. These are all done after-the-fact. What we need as

a goal for the future is to develop a more comprehensive, preventive program that truly begins early in life.

Ten of the 11 states with the highest infant mortality are in the South. This is due in part to the rural nature of these states, but also because the benefits and welfare programs are not as extensive when compared to other regions of the country. The Southern Governors Task Force on Infant Mortality showed that if prenatal care is adequately provided, the incidence of low birth weight is reduced and the neonatal mortality rate drops from 25.6% to 6.1%.

It is interesting to note that the business community has understood this perhaps even better than some of us in medicine. A report from the Council on Economic Development in New York state last August used this data to come to the conclusion that health and education are keys to economic development. The Good Suit Club in Arkansas has also stressed health and education, but there were no pediatricians on either of those committees.

An all encompassing program needs to be developed in order for some of the following to be accomplished: better parenting education for fathers as well as mothers, enhanced nutritional guidance for families, quality child care provisions for all working parents, especially the poor, and optimized intellectual and social development for school readiness. Our country is never going to take children out of the home as is done in Russia and China in order to cure the 30% dropout rate. It will probably always remain voluntary but who better to get into the homes with this kind of program than the pediatrician or family physician? The health care system is the most appropriate source for the early identification of developmental abnormalities.

We have been developing a system we are calling MEND care instead of well child care. MEND is the acronym for Medical, Educational, Nutritional, and Developmental care of children. It broadens the concept of well child care to provide for all infants the kind of care that is important to the early formative years - a good strong medical network, progressive education, developmental stimulation and high nutritional standards.

Professor and Chairman, Department of Pediatrics, University of Arkansas for Medical Sciences, 4301 West Markham, Little Rock, Arkansas 72205.

The whole MEND concept was the result of a Robert Wood Johnson Foundation grant that Dr. Pat Casey and Dr. Bettye Caldwell were able to obtain. They sought to prove that if young children are exposed to a stimulating social and educational environment six hours a day, five days a week, their I. Q.'s can be improved. I showed this project in a small eight minute video to the Young President's Organization and they were unable to differentiate the children of Junior League mothers from those from the worst socioeconomic background.

I also believe advantage must be taken of the important links between pediatrics and geriatrics. At one end of the spectrum, we are trying to promote development at the learning age while trying to prevent diminished development on the other end. If the MEND concept could be made available in rural Arkansas, not only children could be stimulated, but also elderly individuals who could benefit from the same kind of medical, educational, nutritional and developmental umbrella. Why should we let McDonald's have a corner on the market in employing retirees? We could also employ the elderly to help the children, with resulting benefits to both. If pets have a positive influence on the elderly, why shouldn't children be even more effective?

We are also working on a program with the state of Florida to look at a pilot project for those individuals who fall through the gaps in health care. The most underprivileged receive good care by being covered under Medicaid, and the well-to-do receive good care, but a significant number of working poor individuals don't receive proper care. In essence, you would have all children and pregnant mothers covered by some type of third party pay to cover such things as anticipatory guidance and other preventive services.

The *New England Journal of Medicine* recently had a number of articles regarding the primary care physician receiving appropriate remuneration for cognitive functions. There is no doubt that it will occur with Medicare/Medicaid, and I think commercial insurance will follow suit.

The bottom line is that we must develop new and innovative systems for overall child health care similar to what was done with regionalization of care for neonates. The type of program proposed will be much more difficult to implement because of the age spectrum and variety of diseases.

The words of Descartes challenge us: "If ever the human race is raised to its highest practical level intellectually, morally and physically, the science of medicine will perform that service." Let us accept and meet that challenge.

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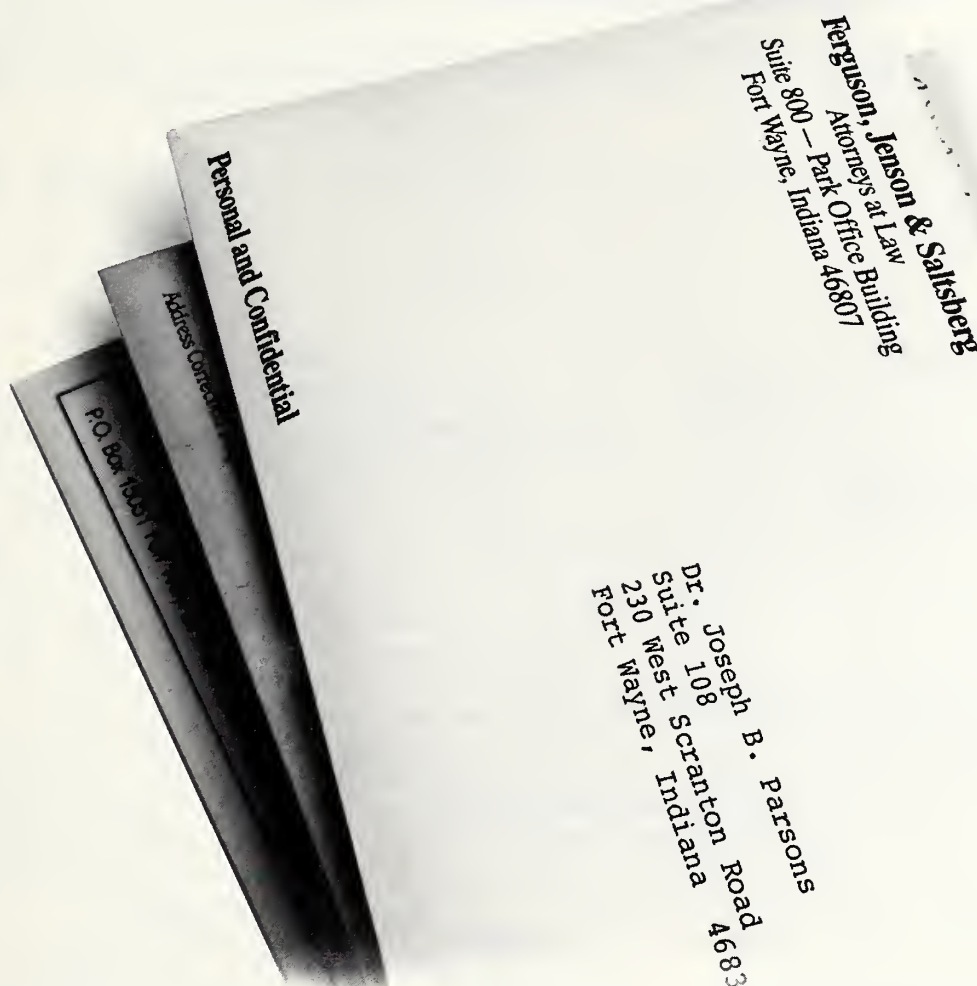
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AIDS IN ARKANSAS 1988

January 1 - November 1, 1988

Total number of cases reported	75	CASES BY AGE GROUP	
Number of deaths	26	Less than 20	1
CASES BY SEX		20 - 29	24
Male	69	30 - 39	34
Female	6	40 - 49	8
CASES BY RACE		50 - 59	3
White	59	60 or more	5
Black	16	OPPORTUNISTIC DISEASE	
CASES BY RISK GROUP		Pneumocystic Carinii	34
Homosexual/Bisexual*	47	Kaposi's Sarcoma	4
IV Drug User	3	Pneumocystis Carinii and Kaposi's Sarcoma	2
Hemophiliac	1	Other	35
Transfusion	6		
Heterosexual (Contacts)	4		
NIR#	4		

* Of the 47 homosexual/bisexuals, 10 are/were IV drug users

No identified risk group (NIR)

AIDS IN ARKANSAS 1985 - 1988

Total number of cases reported	165	CASES BY AGE GROUP	
Number of deaths	89	Less than 20	1
CASES BY SEX		20 - 29	55
Male	154	30 - 39	72
Female	11	40 - 49	24
CASES BY RACE		50 - 59	6
White	132	60 or more	7
Black	33	OPPORTUNISTIC DISEASE	
CASES BY RISK GROUP		Pneumocystic Carinii	81
Homosexual/Bisexual*	102	Kaposi's Sarcoma	8
IV Drug User	16	Pneumocystis Carinii and Kaposi's Sarcoma	5
Hemophiliac	1	Other	71
Transfusion	8		
Heterosexual (Contacts)	7		
NIR#	5		

* Of the 102 homosexual/bisexuals, 26 are/were IV drug users

No identified risk group (NIR)

Source: Arkansas Department of Health.

Invest a Nickel, Save a Dime **School Based Health Services for Arkansas**

M. Joycelyn Elders, M.D., Becky Williams, and Zenobia Harris

Introduction

Children are our state's most important asset and yet many of them arrive at school undernourished and generally in poor health. The better the health of a child, the greater his or her learning potential.

Almost one-fourth of the children in Arkansas live below the poverty level. Many Arkansas children suffer from a variety of health problems including dental cavities, obesity, congenital abnormalities, lack of immunizations, drug and alcohol abuse, pregnancy and psychosocial problems.

In recent years, a growing movement to meet the health care needs of children has developed in many areas of the United States. Many health care providers have moved their services to where children spend most of their time - at school. The reason more health services are not available in all schools in Arkansas, elementary and secondary, is quite simply a lack of resources.

Health status of Arkansas children

The Lt. Governor's Commission on Youth Suicide reports that 192 youths committed suicide between 1984 and 1987.¹ The Office on Alcohol and Drug Abuse states at least 5% of the youth in Arkansas are addicted to drugs or alcohol.² Arkansas ranks second in the United States in the percentage of births that are to teens. Of the 8,874 teens who were pregnant in 1986, over half of those who delivered dropped out of school.³

A youth survey conducted by the Arkansas Department of Health in April 1988 in Lake View, located in rural Phillips County, produced the data which reported that 44% of those surveyed reported engaging in unprotected intercourse, 21% expressed having felt that life was not worth living and 30% said it has been years since they last saw a doctor.

Health screenings in the school identified significant problems with dental disease, obesity, elevated blood pres-

sure, and lack of adequate immunization. The exams also identified cardiac abnormalities among other problems.⁴

A health teacher at a Little Rock high school administered a questionnaire to 10th-12th graders in a health class regarding sexual issues in the 1987-1988 school year. Some of the findings included that 40% of the boys stated they began sexual activity before the 8th grade and 65% of the girls stated they had engaged in sexual activity by the 12th grade.⁵

National data by the Center for Population Options most probably reflects the health care of Arkansas' children in the 1980's in that nearly one-third of children ages 6-16 had not visited a doctor in the preceding year and 15% had no regular source of medical care and adolescents between the ages of 11 and 20 visited physicians offices less than any other group although they had a higher rate of acute conditions (e.g., infections, influenza, injuries)⁶

Why children are not receiving care

A large number of children do not have access to even basic medical care; they include those who live in rural areas and inner cities, who live in poverty, and those who are underinsured or without health insurance.

Changes in family structure in the past few decades aggravate difficulties in obtaining health care. Single parent families or homes with two working parents comprise the majority of households today. Incomes often suffer when parents take off work to take a child to a doctor.

Many families now are either underinsured or non-insured and seek medical care only in life-threatening situations. For those who are insured, often insurance plans do not cover preventive health measures such as annual physicals, dental examination, or immunizations.

Poor children often face insurmountable barriers to adequate care. Lack of transportation and money, lack of knowledge about available services, and lack of knowledge about preventive health care keep them from receiving the services they deserve. Rural children often face non-existent health services or must travel long distances to obtain any health care.

Director, Arkansas Department of Health, 4815 West Markham, Little Rock, Arkansas 72205.

TABLE I. Planning Steps Required Prior to Establishment of School Health Services

- * A planning group must be formed to determine health needs and set goals for the school health service program in the local community
- * A site must be selected to enable planning to center around activities for the locale
- * Community based support and approval in order to begin a comprehensive program.
- * An information campaign is essential to provide clear, concise answers to questions about the program.
- * The support of school officials and parents is crucial to the establishment of a comprehensive school health service program.

Why should we care?

One issue in itself tragically depicts the short- and long-term consequences of neglecting our children's health - teen pregnancy.

The long-term costs of not addressing the problem of teenage pregnancy are tremendous. Babies born to teenage parents and their mothers are the single largest group at risk of poverty and long-term dependency. These babies also account for a disproportionate share of our infant mortality and morbidity. We also know that a large percentage of low birth weight babies will be born to teenage parents. These babies are at increased risk of health and developmental problems. Low birth weight babies cost Arkansas over 3 million dollars a year for health care alone. Many teen parents will drop out of school. Some will find menial jobs; some will depend on AFDC (Aid to Families with Dependent Children) for survival. The loss of healthy, contributing members to society is as great as the economic loss.

One solution: School-based clinics

Health services can become accessible, affordable, and preventive if they are moved into the schools. The goal of a school-based clinic is to improve the overall physical and emotional health of children and adolescents. School-based clinics accomplish this in two ways: by promoting healthy lifestyles so that youth will have less need for health care and by providing good quality accessible health care to children when they need it.

School-based clinics can serve to enrich the classroom educational experience of students by teaching preventive health care consumer behaviors, and promoting the development of good decision-making skills in relation to health and other life issues.

School-based services can also make the difference in fewer absences from classes due to illness by providing a means for early detection and treatment of illness. In addition, these services provide youth with an organized system of regular medical care due to the unique location and accessibility of the services.

History of school health services

The provision of health services in the public schools is not a new phenomenon in the United States. In the 1890's, health programs were developed and implemented in public schools in response to large numbers of immigrant children who attended school suffering from infectious disease such as tuberculosis. Most early school health activities were preventive in nature and were implemented by school district physicians. In the 1930's, schools began to promote standardized health screening and first aid services. Referrals were made to private physicians for treatment of illness. In the 1940's the school district physician's role was changed to the point that schools began to employ nurses to provide more day-to-day follow-up and care to school age populations.

Since the 1960's, various efforts have grown and developed to meet the needs to children needing treatment in school health programs. Nationally, public and private foundation funds have been utilized to develop and promote comprehensive school health services. Many cities in the U.S. have developed school-based clinics to provide a wide variety of services (which include treatment) for school-age children. Cambridge, Massachusetts; Dallas and Galveston, Texas; Hartford, Connecticut; and St. Paul, Minnesota are but a few cities which boast of the existence of health clinics in their schools.⁷

Establishment of comprehensive school health services

The number of school-based clinics which provide comprehensive care in the U.S. continues to grow as the need for adolescent health services continues to be documented and recognized.⁸ In general, several important steps need to occur prior to establishing comprehensive school health services in the school setting (Table I). In designing a school

TABLE II. Designing a School Health Program

- * Parental consent must be obtained in order to provide care to children.
- * A consolidated, holistic approach to the health care needs to the children must be evident.
- * A variety of services should be available to prevent fragmentation of care and promote student use of the service by the availability of such services.
- * A caring, youth-oriented staff must be available to provide care and establish rapport with students and the community.
- * Each patient must be given the opportunity to spend ample time with caregivers to promote trust and allow for adequate assessment of patient needs.
- * A detailed follow-up procedure for referrals and missed appointments must be developed.
- * Cooperative relationships with other community providers and agencies must be developed and maintained by the clinic staff.
- * Data on visits, compliance rates, and illnesses treated must be collected for program monitoring and evaluation.

TABLE III. Comprehensive School Health Services

Health Assessments/Physical Examinations

Routine screening physicals (scoliosis, hearing/speech/vision where applicable, EPSDT)
Sports physicals
Gynecological exams/cancer screening
EPSDT screening
Blood pressure screening
Dental screening
Screening for infants of adolescents (if in school/day care)
Immunization status
WIC assessment

Assessment and Referral of Minor Illness, Disease and Injury

Flus and colds
Earaches (otitis media)
Sprains, cuts, burns, etc.
Sore throat (ex: strep)
Dermatologic conditions (ex: acne, dermatitis, impetigo)
Minor gynecological problems (ex: vaginitis, yeast)
Menstrual disorders/dysmenorrhea
Sexually transmitted diseases
Prenatal urinary tract infections-acute
Anemia

Counseling/Education

Abstinence/sexuality education (menstruation)
Contraceptive methods
Referrals, Prescriptions, Dispensing
Sexually transmitted disease counseling
Nutrition/weight reduction/weight management
Smoking prevention and cessation
Stress management
Alcohol and drug abuse prevention
Safety (seat belt, car seat, helmets)
Parenting classes
Suicide prevention
Family counseling
Mental health and psychosocial counseling
Job counseling and employment training
Pregnancy counseling
Breast self-exam
Testicular self-exam
WIC counseling if applicable
Abuse counseling

Home Visitation

For at home counseling with parents, students, follow-up of problems, etc.

Referrals for Follow-up for Major Health Problems

Chronic diseases (ex: diabetes, hypertension)
Eating disorders (anorexia/bulimia)
Alcohol and drug abuse
Suicide prevention counseling
High risk prenatal patients/problems and delivery services
Major gynecological problems
Other surgical problems (tumors, etc.)
Infectious disease epidemics

Sanitarian Services

Environmental health
School safety inspections
Asbestos testing

Laboratory testing and measurements as appropriate

Hematocrit/hemoglobin, VDRL, Gonorrhea culture, Pap smear, Pregnancy test, PKU, Urinalysis, Weight, height, blood pressure

health program, several distinct features must be apparent (Table II).

Adequate funding is essential for a comprehensive school health services program. A variety of funding sources exist for establishing school health services. Private funding sources include local and national foundations. Typically foundation grants are awarded to provide start-up monies for a school-based health program and are not for ongoing service delivery. Public funding sources include federal (MCH Block Grant, Medicaid, EPSDT) state (taxes, federal allocations), and local monies. Many states have passed legislation earmarking funds for school-based clinic operations.

Cities are beginning to look at innovative approaches to addressing the health needs to school-age populations. Little Rock, Arkansas, has developed a city-wide strategy for addressing problems such as teen pregnancy and high school drop-out rates. Part of the strategy will include support of a comprehensive school health clinic at a large high school in the metropolitan Little Rock area.

Typically, a variety of services is offered in a school-based health service. Common services offered include a spectrum of services from routine physical exams to job counseling.⁹ Table III depicts a comprehensive list of services available in a school health services program.

Conclusion

The health of children is influenced by complex physical and psychosocial forces. Often, children need medical and other support networks to obtain and maintain a state of health. Many young people are not receiving the kind of health related care they need and deserve.¹⁰ School-based clinic services have developed out of a real need to provide for the health and social needs of our children. Due to their unique location and accessibility to students, school-based health services seek to improve the overall health status of youth. Through interaction with a school-based health program, a number of the health needs of children can be adequately met and the entire course of a child's life can be changed for the better.

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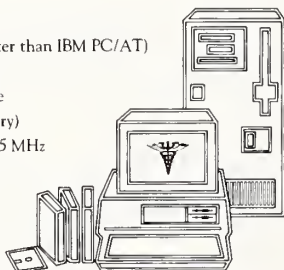
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Housestaff Recognitions of the UAMS College of Medicine

William G. Reese, M.D.*

This summary of recognitions received and given by Housestaff of the UAMS College of Medicine is part of a historical trilogy reporting also on faculty and members** of the Arkansas Caduceus Club¹ and on recognitions of medical students.² A large percentage of Housestaff became or will become members of the Arkansas Medical Society, the Caduceus Club and the UAMS faculty - and often all of these. Housestaff members receive and also initiate awards to other residents, respected teachers, and other helpful people.

Most Housestaff Awards are departmental but some, like Sigma Xi, are not. This organization recognizes scientific accomplishment of interns, residents, medical students, graduate students and faculty members and is certainly not restricted to physicians. Alpha Omega Alpha honors a few members of Housestaff who were not elected to AOA here or elsewhere while medical students.

Now we consider other awards which are primarily departmental in nature.

Anesthesiology

The *Robert D. Dripps, M.D., Memorial Award* (presented by Janssen) with names engraved on departmental plaque, is presented each year "to the outstanding graduate resident in Anesthesiology." From 1982-87 the award went to Drs. M. Carl Covey, Jr.; John A. Mallory; Gerald A. Buchman; Mark D. McLeane; and James C. Crews.

* Reprint requests to: William G. Reese, M.D., Marie Wilson Howells, Professor and Chairman Emeritus, Department of Psychiatry and Behavioral Sciences, 4301 West Markham, Little Rock, Arkansas 72205-7199

Obstetrics and Gynecology

The *Upjohn Achievement Award*, an individual and departmental plaque plus cash, is presented to a graduating resident for excellence during ob/gyn training. Sequential recipients from 1979-1988 have been Drs. Cullen Dale Fuller, W. Michael Yarbrough, David R. Taylor, Stephen R. Marks, Larry W. Pearce, Steven K. Montoya, Gaylon L. Brunson, Janet Riley Cathey, Stephen E. Torres, and Mary B. Harris.

The *Willis E. Brown Prize Paper Award*, supported by the *Willis E. Brown Memorial Fund* initiated in 1987, consists of certificate, cash and the name on a departmental plaque for the resident who presented the best paper at the Obstetrics and Gynecology Resident Research Day. Recipients to date were Linda N. Teal and Mary B. Harris.

Ophthalmology

The *Raymond and Mary Morris Annual Ophthalmology Resident Award*. Cash, individual plaque and name engraved on departmental plaque to "the ophthalmology resident who presents the most outstanding research paper at the Annual

** This paper failed to note that in 1970 Dr. Lawrence E. Scheving became the Rebsamen Professor of Anatomical Sciences in a Chair which was never endowed. Since the paper, additional awards have been made: Eugene J. Towbin received the College's Distinguished Service Award (and also an honorary D.Sc. degree from UALR); Horace N. Marvin was awarded the D.Sc. degree from UAMS; and the Caduceus Club presented a Distinguished Alumna Award to M. Joycelyn Elders and the Distinguished Faculty Award to Joseph H. Bates and to Shirley A. Gilmore.

Ophthalmology Residents' Day meeting" (with smaller cash prize for second and third place). The award is funded by the Retinal Research Fund and was begun in 1981 in honor and memory of Mr. Raymond Morris, a member of their Board of Directors.

Sequential winners beginning in 1981 have been: Altan Zalta (twice), Tom Komadina, Lewis Pearson, Rickey Medlock, Scott Sawyer, Laurie Gray and, in 1988, Richard Harper (1st place), Ricky Medlock (2nd) and Alan Watson (3rd).

Otolaryngology

The residents select honorees for the *Otolaryngology Teaching Award* and the *Otolaryngology Service Award*. Each of these, which provide individual plaques and inscription of departmental plaque, was begun in 1977.

Previous recipients of the teaching award, all M.D.s, were Robert M. Tirman, Robert N. McGrew, Stephen J. Wetmore (four times), Jon R. E. Dickens, Robert W. Seibert, James Y. Suen (twice), Hassan Bashiri, Nancy L. Snyderman and Michael Key.

UAMS Otolaryngology Resident Research Day Scientific Excellence Awards include a listing on departmental plaque and cash for first and second place. Sequentially since 1982 first place winners were Drs. J. L. English, H. G. Bienvenu, J. E. Zellmer, S. B. Welch (twice), and Scott Stern; and second place were Drs. M. A. Kenna (twice), H. G. Bienvenu (twice), J. E. Zellmer and Greg Borg.

Pediatrics

Resident Award for Excellence in Primary Care. Individual and departmental plaque for excellence in pediatric primary care. Recipients, all M.D.s, were: W. Ken Jones, Carl Wesley Kluck, Yoland M. Condrey, Charles David Jackson, Mark H. Lovell, Hannah Beene Lowder, Robert G. Hornbeck, and Rick W. Harrison.

Teacher of the Year Award. This award, an engraved plaque, is presented annually by the pediatric housestaff to a faculty member in recognition and appreciation of excellence in teaching. Recipients from 1976-88 have been: Terry Yamauchi, Joanna Seibert, Lee Chalub, Russell Steele, Pediatric Cardiology Division (W. T. Dungan, J. B. Norton, Florence Char, and Richard Readinger), Russell Steele, Robert H. Warren, Jarlath Mitchell, Richard F. Jacobs, Ernie Kicl, Elizabeth Frazier, Michele Moss, Robert H. Warren and Betty A. Lowe.

Friends of the Housestaff Award. This annual award was established in 1976 to honor the person, who in the opinion of the housestaff, was the most supportive, sympathetic and understanding during the year. The winners (not listed here) receive an engraved plaque.

Psychiatry and Behavioral Sciences

Robert F. Shannon, M.D. Award. Plaque "presented yearly in recognition of outstanding contribution to psychiatric education in Arkansas." The award, initiated in 1985 by G. Richard Smith, Director of UAMS Psychiatry Resi-

dency Program from 1983-85, in honor of a previous residency director who was an outstanding teacher, is supported by departmental revenue. Awards have been made sequentially to Drs. William G. Reese, Emile P. Eckart, Lloyd E. Rader, and G. Richard Smith.

Outstanding Senior Resident. The award of plaque and cash supported by Sandoz Company and departmental funds was developed to promote excellence within the department and the resident training program. The annual recipient is selected by vote of all psychiatry faculty, and these have been, in order: William J. Meek, Virgil Wooten, Robert L. Higginbotham, Lynn Taylor, and Frank Brown.

The E² (Emile Eckart) Award, since 1986, honors a beloved teacher of psychiatry residents who select recipients by vote. Recipients to date: Emile Eckart, G. Richard Smith and Graham Reid.

The William G. Reese, M.D. Award. A plaque and cash is awarded to a resident in adult or child psychiatry for excellence in research/scholarship for work completed in the previous year. This award was initiated by Frederick G. Guggenheim, Chairman of the Department, in accordance with the wishes of William C. and Theodosia Nolan, the major donors. The first award (1988) went to Andrew J. Powell.

The John E. Peters, M.D. Award in Child Psychiatry. Certificate, cash and name inscribed on departmental plaque "to be awarded from time to time to psychiatry residents who have written a distinguished essay, scholarly contribution, or results of clinical investigation worthy of publication on any subject relating to child psychiatry." Endowment funds for this new award were contributed by friends of Dr. Peters as he became *WOHDAN* Professor of Child Psychiatry *Emeritus* on July 1, 1988.

As to national honors for psychiatry residents, Mark Drogin was earlier designated as a Resident Member of the Group for the Advancement of Psychiatry; and Frank Brown recently became a *Laughlin Fellow* of the American College of Psychiatrists and also a *Mead Johnson Fellow* of the American Psychiatric Association.

Radiology

The Department has no intramural awards, but nominates completing residents to the Radiologic Society of North America for research and education fellowships. In 1986, Dr. McCowan was one of the few to receive this award, and the first from Arkansas.

Surgery

Robert M. Bransford Memorial Award. A substantial cash prize is given to the surgical resident who best exemplifies those attitudes of skill and compassion which Dr. Bransford manifested. A permanent plaque inscribed with the names of the annual honorees is in the *Gilbert S. Campbell Library*. The partners of the Southern Clinic, which Dr. Bransford joined in 1961 upon completion of his residency training at UAMS, provided \$25,000 to establish the capital

fund. Consecutive recipients from 1985-87: James W. Slezek, J. Ralph Broadwater, Jr., Paul K. Osteen and Russell H. Wood.

Keith Kilcrease Award. Cash awards go annually to first, second, and third place annual winners whose names are inscribed on a plaque in the *Campbell Library*. The selections are based on presentations of research by surgery residents. The capital fund consists of \$7,500 given by The Davis & Geck Company of Chicago in memory of a sales representative, Keith Kilcrease, plus an equal amount from the Department of Surgery.

Sequential recipients 1985-88: William P. Fiser (first prize), Stephen K. Morrison (1st), Paul Osteen (2nd), Jack Alston (3rd); Russell H. Wood (1st), Homer L. Fleisher and Michael E. Foster (2nd); John H. Roark (3rd); Kris Shewmake (1st); Paul Citrin (2nd), George Shaak and Homer L.

Fleisher (3rd); Russell Degges (1st), Kurtis S. Vinsant (2nd) and Paul Citrin (3rd).

Conclusion

This paper completes the trilogy on the various awards and recognitions by the College of Medicine of the University of Arkansas for Medical Sciences. Information summarized was provided by the clinical chairmen and/or their directors of residency programs. Perhaps affluent readers will be stimulated to provide other awards, particularly in departments which now have none.

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RE: Antitrust Immunity for Peer Review

Michael Mitchell, J.D.*

Introduction

Recently, there has been a great deal written regarding activity in the courts dealing with antitrust damage judgments against the physician members of a hospital peer review committee. There has also been congressional activity in the area of immunity. Here is what it is all about.

History

It started in 1981 when a vascular surgeon in a small town in Oregon sued his former clinic and its members who sat on the hospital peer review committee.¹ The surgeon had worked for the clinic one year when he was offered a partnership. However, he chose to set up his own practice in competition with the clinic. Thereafter, clinic doctors made no surgical referrals to him but instead referred patients 50 miles away. Clinic doctors "...often declined to give consultations..." and "...refused to provide backup coverage..."² At the same time, the clinic doctors criticized the surgeon "...for failing to obtain outside consultations and adequate backup coverage."³ The surgeon's patients were diverted to clinic doctors and clinic doctors often untruthfully advised emergency patients that the surgeon was unavailable. The surgeon's associate was "attacked...in various ways..." but soon after he left the surgeon he was invited to join the clinic.⁴ Eventually, clinic doctors promoted charges before the hospital peer review committee and the state medical board. The peer review committee was dominated by clinic doctors and the chairman of the state medical board was a clinic doctor. The surgeon was forced off the staff after the peer review committee recommended privilege termination with the physician members refusing to "testify as to their personal bias against him (the surgeon)."⁵ In 1984, the jury returned a verdict against the clinic doctors and the clinic for more than \$2 million plus attorney's fees.

In 1986, to protect hospital peer review committees from antitrust suits, Congress passed the Health Care Quality Improvement Act (the Act).⁶ The Act grants antitrust immunity to members of hospital peer review committees if the hospital adopts the requirements of the Act. The Act requires (1) certain hearing and notice requirements, (2) absolute right to attorney representation, (3) no competitors on the hearing panel and (4) disciplinary reports to the HHS.

Also in 1986, the Ninth Circuit Court of Appeals reversed the judgement against the clinic and its doctors on the basis that the hospital peer review was "state action."⁷ In other words, peer review requirement as a condition for the hospital's license expressed a state "policy to replace pure competition with...regulation."⁸ (Similar to how telephone companies, electric companies and milk prices are regulated.) Under case law, such regulation exempts that activity from antitrust action.⁹

In 1988, the United States Supreme Court reversed and reinstated the judgment against the clinic and its doctors. The Supreme Court said:

Because we conclude that no state actor in Oregon actively supervises hospital peer review decision, we hold that the state action doctrine does not protect the peer review activities challenged in this case from application of the federal antitrust laws.¹⁰

Therefore, antitrust allegations may be alleged against members of the hospital peer review committees where there is evidence of "conspiracy in restraint of trade" or acts tending to exclude competition.

Conclusion

In the event a hospital conforms its bylaws to the requirements of the Health Care Quality Improvement Act, the law gives hospital peer review committees "safe harbor" against antitrust actions. In addition, states might choose to pass their own form of "state action" legislation to govern the

Legal Counsel for the Arkansas Medical Society, Mitchell & Roach-ell, Post Office Box 1510, Little Rock, Arkansas 72203.

operation of hospital peer review committees.¹¹ Some writers caution "not to rush to conform to the Act" since the new procedure will be too legalistic, take too long, be too adversarial and hearing panels will have to be recruited outside the service area of the hospital.¹² Other authorities suggest that antitrust actions in peer review settings are rare and occur "...only...where the peer review process is not used to review individual competence, but rather, is a sham used to exclude a competent practitioner or group of practitioners from the market and thus to restrain competition..."¹³

References

1. The suit included allegations of antitrust violations under Sections 1 and 2 of the Sherman Antitrust Act. 15 U.S.C. Section 1 *et seq.* "Every...conspiracy in restraint of trade of commerce...is hereby declared to be illegal." Section 2 violations include acts tending to exclude competition.
2. *Patrick v. Burgett*, 108 S. Ct. 1658 at 1661 (1988).
3. *Id.*
4. *Patrick v. Burgett*, 800 F.2d 1948 at 1503 (1986).
5. 800 F.2d at 1504.
6. 42 U.S.C. Section 11049, *et seq.* (1986).
7. 800 F.2d 1498 (1986).
8. *Id.* at 1506.
9. *Parker v. Brown*, 317 U.S. 341 (1943).
10. *Patrick v. Burgett*, 108 S. Ct. 1658 (1988).
11. Only Oklahoma has opted out of the Health Care quality Improvement Act and passed its own law. The California Medical Association successfully passed a similar law, which was vetoed by the Governor. There was concern that the new law would "...greatly increase the time and expense of peer review to the point where hospitals and M.D.s would lose their appetite for it." Both the California and Oklahoma bills were reported to "largely mirror the federal act..." Finally, it is reported that "the best antitrust attorneys in the county...didn't know...(whether California law)...will provide enough state action oversight to give medical staff immunity from antitrust liability." See *American Medical News*, Sept. 16, 1988 and *American Medical News*, Oct. 21, 1988.
12. *Legal Monitor*, McDermott Will & Emery, p. 26 (1987).
13. Letter from Charles F. Rule, Acting Assistant Attorney General, Antitrust Division, United States Department of Justice, to Kirk V. Johnson, General Counsel, American Medical Association, December 2, 1986.

PRACTICE OPPORTUNITY

Nature of Practice:	General or family practice with moderate obstetrical load. 1/3 Medicaid.
Medical Community:	Two Family Practitioner's and one General Practitioner doing obstetrics, one Pediatrician, one Internist, one radiologist, one Ophthalmologist, and two Family Practitioner's not doing obstetrics.
Hospital:	65 bed, well-staffed modern hospital with active and advanced ICU-CCU. Active General Surgery department, and active Obstetrical department.
Community:	Rural Delta. About 15,000 population in immediate area. Mostly farming and light industry.
Environs:	Excellent hunting and fishing. Deer and turkey hunting are especially good. Bass and crappie fishing in most of the numerous cypress lakes is excellent. The hospital is several hundred yards from the largest natural lake in Arkansas and the largest, 18 miles long, oxbow lake on the Mississippi.
Office space:	Modern office 50 yards from the hospital Emergency Room.
Requirements:	M.D. or D.O. with obstetrical experience and desire to serve a broad spectrum of medical needs in a rural setting.
Financial:	Negotiable. Physician seeking help presently netting over \$200,000/year from his practice. This physician is willing to give up to 1/2 of his present practice.

If interested contact: Tom Tvedten (Tweden), M.D.; Box 512A, Lake Village, Arkansas 71653.
Office (501) 265-3813 or 3814. Home (501) 265-2412 (call collect).



ALLAN J. HAMILTON, M.D.

Neurosurgical Resident and Research Fellow,
Massachusetts General Hospital, Boston, Massachusetts.
Captain, U.S. Army Reserve.

EDUCATION Ithaca College, B.A. (Magna Cum Laude);
Hamilton College (Pre-med); Harvard Medical School.

RESIDENCY General Surgical Internship. Neurosurgical
Residency, Massachusetts General Hospital.

CONTINUING EDUCATION Neurology and Neuro-
surgery Research Fellowship Training, National Institutes
of Health.

OUTSTANDING ACHIEVEMENTS Olsen Memorial
Fellowship, National Masonic Medical Research Foundation;
Albert Schweitzer Fellowship, International Albert Schweitzer
Foundation; Harvard Medical School Cabot Prize for Best
Senior Thesis; recently published article, "Who Shall Live
and Who Shall Die" in Newsweek Magazine.



Soldier being examined for effects of high-altitude cerebral edema.

“The work I’m doing in the Army Reserve fits perfectly with my academic research interests in civilian life. The Army is very concerned with the effects of high-altitude cerebral edema, which is a mirror model of cerebral hypoxia, something I deal with every day in our neurosurgical intensive care unit. I couldn’t ask for a smoother transition. And that’s true for a lot of Reserve physicians. All we really do is change our clothes, not our mindset.

“Some of the projects the Army is undertaking are on the cutting edge of research. For example, I’m currently involved in developing for the Army a prototype of a non-invasive intracranial pressure-monitoring device that we hope will allow us to measure pressure changes as the brain swells—without drilling holes in the skull. If we can get our design to work, such a device could revolutionize high-altitude medicine as well as civilian neurosurgical care.

“The quality of medicine and the caliber of people I’ve been associated with in the Army Reserve are, without question, equal to civilian hospitals. In fact, I’m giving serious consideration to applying for an active duty academic position in Army Medicine when my residency ends at Massachusetts General. //

Find out more about the medical opportunities in the Army Reserve. Call toll free 1-800-USA-ARMY.

**ARMY RESERVE MEDICINE.
BE ALL YOU CAN BE.**

THE LOWER RESPIRATORY TRACT— More vulnerable to infection in smokers and older adults



Experience counts

Ceclo® Pulvules®
250 mg
cefactor

think of it first

For respiratory tract infections due to susceptible strains of indicated organisms.

Summary.

Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci).

Contraindication: Known allergy to cephalosporins

Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclo in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclo should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in

moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.

- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclo penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthritis, and frequently fever): 1.5%.
- Usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclo. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
 - As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
 - Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertension, dizziness, and somnolence have been reported.
 - Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1% and, rarely, thrombocytopenia.
- Abnormalities in laboratory results of uncertain etiology**
- Slight elevations in hepatic enzymes.
 - Transient fluctuations in leukocyte count (especially in infants and children).
 - Abnormal urinalysis; elevations in BUN or serum creatinine.
 - Positive direct Coombs' test.
 - False-positive tests for urinary glucose with Benedict's or Fehling's solution and ClinTest® tablets but not with Tes-Tape® (glucose enzymatic test strip, Lilly).

[061088L]

Additional information available from
Eli Lilly and Company Indianapolis, Indiana 46285.

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CR-5012-B-849345

Distribution of Drug Samples

New Law Preserves Physicians' Right

*Gerald J. Mossinghoff, President
Pharmaceutical Manufacturers Association**

Physicians should know that their right to use and distribute drug samples to patients is in no way affected by the new Prescription Drug Marketing Act.

President Reagan signed the Act into law in April and it took effect October 20, 1988. Its main thrust is to establish new requirements affecting the distribution and marketing of prescription drugs. Of specific interest to physicians are the provisions that ban the sale, trade or purchase of drug samples and require manufacturers which distribute pharmaceutical samples to follow certain storage, handling and accounting procedures.

Criminal penalties were put into effect on July 22, 1988 for anyone who sells, trades or purchases drug sample. The penalties can be as much as ten years in prison and up to \$250,000.

The physician needs to keep in mind a few points about this new law:

- * *The law does not prevent physicians from receiving or dispensing drug samples.*
- * *In order to receive samples, physicians are required to sign a written request form verifying the identity of the drug and the quantity requested. This part of the law became effective October 20, 1988. This written request form is required by some states and is already commonly used by manufacturers.*

- * *Although the law does not require physicians to maintain records, manufacturers may ask physicians for their help in assuring that they did receive the samples requested. While the new law does not mandate physicians to cooperate with this verification procedure, the law does encourage manufacturers to implement such a system.*

The Pharmaceutical Manufacturers Association and the American Medical Association convinced Congress that the initial proposals to ban samples would hamper efforts to provide quality medical care.

Samples allow the physician to evaluate a specific drug to ensure the patient tolerates it and to determine if the drug has the desired effect. Samples also permit the physician to begin therapy immediately, which can be very important in some cases, especially in rural areas.

As a result, the legislation that was passed does not threaten the practice of sampling, but does help safeguard the integrity of prescription drugs distributed in this manner. In fact, many of the procedural requirements imposed on manufacturers have long been established policies for PMA member companies.

Physicians and patients value drug samples, according to surveys, and believe the practice of sampling should continue. PMA and its member companies also believe in the value of sampling and we will work to implement this new law smoothly so that samples can continue to place a useful role in patient care.

1100 Fifteenth Street NW, Washington, DC 20005.

Copies of an outline of the Prescription Drug Marketing Act is available in the Society office. Contact Martha S. Taylor, Journal Managing Editor, if you would like to receive a copy of the outline.

ELECTROCARDIOGRAM OF THE MONTH

John Smith, M.D.
John W. Watson, M.D.
Division of Cardiology
UAMS - LRVA Medical Center
Little Rock, Arkansas

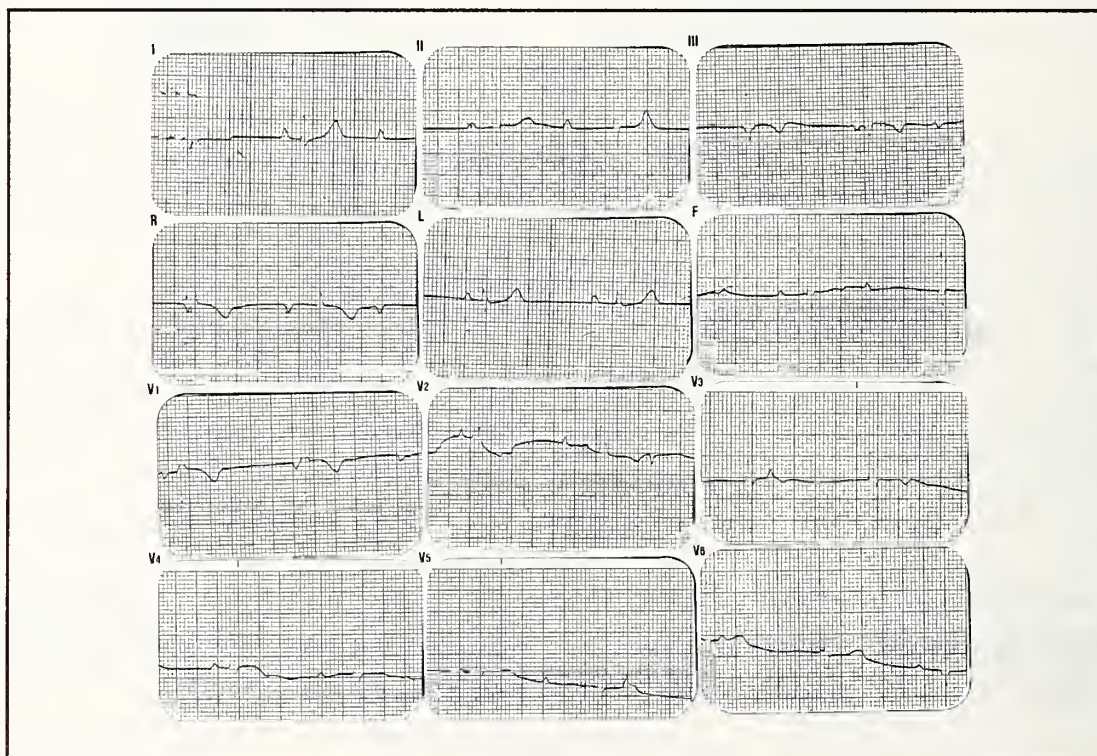
CLINICAL HISTORY:

L. H. is a 10-year-old patient who presented to the hospital because of exertional syncope. The patient had a pulse rate of 50 beats per minute, a blood pressure of 130/50, an ejection type heart murmur, and an S_3 gallop. The ECG is shown. What do you think?

DISCUSSION:

The P-wave rate is about 75 per minute and the QRS rate 53 per minute. There is no constant relationship between the P-waves and the QRS complexes. The QRS duration is normal. Thus, the patient has AV dissociation with junctional rhythm. Her physical signs and syncope can all be explained on the basis of the electrocardiographic findings.

The feature editor wishes to thank Dr. Smith of Conway for his assistance with this month's ECG.



Minutes of the House of Delegates of the Arkansas Medical Society October 9, 1988

Speaker Sybil Hart called the House of Delegates to order at 1:30 p.m. on Sunday, October 9, 1988. Amail Chudy gave the invocation.

Members of the following county medical society were seated:

Arkansas - John M. Hestir, Hoy B. Speer, Jr.
Ashley - not represented
Baxter - Robert Baker
Benton - not represented
Boone - Ross E. Fowler, Robert H. Langston
Bradley - not represented
Carroll - not represented
Chicot - Danny Berry, John P. Burge
Clark - not represented
Clebune - Thomas L. Eans
Columbia - not represented
Conway - not represented
Craighead-Poinsett - Joe Verser
Crawford - not represented
Crittenden - not represented
Cross - not represented
Dallas - not represented
Desha - not represented
Drew - Paul A. Wallick
Faulkner - not represented
Franklin - not represented
Garland - Ronald J. Bracken
Grant - not represented
Greene-Clay - Asa A. Crow, J. Larry Lawson
Hempstead - not represented
Hot Spring - C. Randolph Ellis
Howard-Pike - not represented
Independence - Jim E. Lytle
Jackson - not represented
Jefferson - Lee Forestiere, Lloyd Langston,
Ishmael S. Reid, Jr., T. E. Townsend
Johnson - not represented
Lafayette - not represented
Lawrence - not represented
Lee - not represented
Little River - James D. Armstrong
Logan - not represented
Lonoke - not represented
Miller - A. E. Andrews
Mississippi - Sybil Hart, Merrill J. Osborne
Monroe - not represented
Nevada - not represented
Ouachita - Robert H. Nunnally

Phillips - L. J. P. Bell, Francis M. Patton
Polk - not represented
Pope - Gerald A. Stolz
Pulaski - Glen Baker, Amail Chudy, Paul J. Cornell,
Warren Douglas, Fred O. Henker, III, William N.
Jones, W. Ray Jouett, Charles Logan, Harold Purdy,
Charles Rodgers, Ben N. Saltzman,
Robert Shannon, James Weber
Randolph - not represented
Saline - Marvin Kirk
Sebastian - A. C. Bradford, William Schemel,
Morton Wilson
Sevier - not represented
St. Francis - not represented
Tri-County - not represented
Union - Wayne Elliott, George Warren
Van Buren - not represented
Washington - J. Warren Murry, David Rogers
White - not represented
Woodruff - not represented
Yell - not represented
Resident Physician Section - not represented
Medical Student Section - not represented

Other members present were Robert Benafield, Deborah Bryant, J. David Busby, Amail Chudy, and Dr. and Mrs. Gordon Oates. Guests included Drs. Donald Barton, President, and Nelson Rue, President-elect, of the Kentucky Medical Association; Mr. Joseph A. Del Grasso of KATV Television Station; and Mr. Paul Harris and Mr. Fred Reddock, Pulaski County Medical Society. Staff members present were Ken LaMastus, David Wroten, Lynn Zeno, Peggy Pryor Cryer, and Mike Mitchell, AMS General Counsel.

The following business was transacted:

1. Speaker Hart introduced the special guests seated at the head table, Drs. Don Barton, President, and Nelson Rue, President-elect, of the Kentucky Medical Association.
2. Speaker Hart asked David Wroten of the AMS staff to come forward to give a report of the Public Relations Committee. Mr. Wroten introduced Joseph A. Del Grasso, Vice President of Sales and Marketing, KATV Television Station.
3. Mr. Wroten and Mr. Del Grasso presented the outline for an Arkansas Medical Society television project to air in February, 1989. The purpose of the project, called "Health Call," is to provide medical information to the public through a day-long call-in program and a one hour

prime time television special. Arkansas Medical Society physicians from around the state will be asked to participate by manning the phones and answering "general" health questions from callers in the KATV viewing area (approximately 85% of the state). The one-hour special will deal specifically with four topics: heart disease, cancer, diet and fitness, and substance abuse.

Studies show that the public has a large appetite for health information and that they prefer that this information come from physicians. To this end, the project will build on the favorable one-on-one doctor/patient relationship that is a key to improving the public's attitude toward the medical profession. Funding for the program will come from pharmaceutical companies, hospitals, and other closely related entities. Seventy-five percent of the total cost must be obtained by December 15th to proceed with the project.

4. Speaker Hart recognized Asa Crow, Chairman of the Indigent Care Committee, who outlined a program being presented to the House for their consideration and vote. (A summary of the program outline follows these minutes.)

5. Dr. Crow introduced Drs. Donald Barton and Nelson Rue who discussed the Indigent Care Program which has been in effect in Kentucky since 1985. Both physicians summarized the successes of their program as they perceived it. There was time allowed for questions and answers. After the discussion, the following motion was made by Asa Crow and seconded by Ben Saltzman.

The Indigent Care Committee moves that:

The House of Delegates approves the concepts of the Arkansas Physicians Care Program.

The Indigent Care Committee will then have the responsibility of establishing the working elements of the program.

The Indigent Care Committee will have the responsibility of recruiting enough physicians to participate in this program so as to guarantee its success.

A request should be made to the Governor's Indigent Care Commission for funding of the non-profit foundation which will fund the cost of this program.

No public announcement of this program should be made until the program is in place.

The motion passed unanimously.

6. Speaker Hart recognized James Weber, Chairman of the Legislative Committee, who discussed a letter he received from a Massachusetts' physician outlining his dissatisfaction with their Governor and Presidential Candidate, Michael Dukakis.

7. Chairman Weber asked Lynn Zeno, Director of Governmental Affairs, to come to the podium and outline the areas of concern for the 1989 General Assembly. An outline of proposed legislation is as follows:

Malpractice/Legal Issues

Immunity for patient treatment under AMS Indigent Care Plan

Immunity for reporting of impaired physicians

Admissibility of collateral source benefits

Shorten statute of limitations for wrongful birth actions

Insurance Regulations

Third Party Payor Responsibility Act

Notification by third party payors of beneficiary reimbursements

Registration/regulation of Utilization Review Procedures

Health Issues

Criminal penalties for persons knowingly infecting others with AIDS

Required reimbursement for rape treatment and examination

8. Speaker Hart recognized William Jones, Chairman of the AIDS Committee, who asked to be recognized to bring an item of new business before the House. Dr. Jones read a resolution on behalf of the committee commending Dr. Joycelyn Jones Elders' accomplishments as Director of the Arkansas Department of Health. (The resolution follows these minutes).

9. Upon a motion from Charles Logan and seconded by Ishmael S. Reid, Jr., the House voted to receive the new business.

10. Upon a motion from William Jones and seconded by Charles Logan, the House voted to approve the resolution commending Dr. Elders as submitted.

There being no further business, the House adjourned.

Conceptual Design: Arkansas Physicians Care Program (A Program for Assisting Medically Indigent Arkansans)

The AMS Indigent Care Committee has conducted a study of a Kentucky program which provides needed health care to the state's medically indigent. The program has been in effect since January, 1985, and has seen a tremendous amount of success. The AMS committee is proposing a similar plan to address the needs of the indigent in Arkansas.

The program would be composed of four elements: physicians who volunteer to see patients in their offices at no charge (Arkansas Physicians Care); Arkansas hospitals who agree to treat the eligible at no charge; a non-profit charitable foundation (Arkansas Access to Health Care) which would provide funding from both private and public sources; and the Arkansas Department of Human Services which would be responsible for certifying the medically indigent.

Those benefiting from such a program would obviously be the people of Arkansas who through lack of income cannot

afford medical care. Physicians and hospitals would benefit from the favorable public relations this program would generate. Both physicians and hospitals are currently seeing these patients, but for the most part receive no credit for it. This program should help to improve the image of both physicians and hospitals by letting the public know we care.

This program would obviously create some imposition on volunteer physicians who would be providing care to a few people not currently being seen. By the same token, hospitals, which in many cases are required to provide some level of indigent care, would be asked to provide their services to an additional number of people. It is anticipated that the major problem area in the state would be along the Delta which has a larger number of unemployed and low income, while also having fewer hospital beds and physicians.

If the Kentucky program is used to predict future experience in Arkansas, each physician participating in the program should expect approximately three encounters during the first four or five months. Over time, the average should be about one to one and one-half referrals per month. Although primary care physicians, especially in high poverty areas such as the Delta, would likely receive more calls, it should be noted that those physicians are already seeing many of these patients.

It is interesting that in the Kentucky program, 75% of those certified eligible indicated they already had access to a physician. Over one-half of Kentucky's physicians are volunteers in the program.

For the program to work, there must be an adequate number of primary and non-primary care physicians willing to participate in the program. The same would be true of hospitals. The Arkansas Hospital Association has agreed to work with the program and the Arkansas Dental Association is considering it. Efforts should be made to obtain cooperation from pharmacies and/or drug companies to provide medications.

Plan of Operations

The program would be funded through a private non-profit, charitable foundation. It would initially require three employees, one of which would be an R.N. or L.P.N. A WATS number would be installed to handle the referrals.

The Arkansas Medical Society would recruit volunteer physicians whose name, location and field of practice would be placed on computer. Local offices of the Department of Human Services would process the certification of eligible recipients by having them complete a three-part, color-coded, form. One copy will be sent to the foundation office,

one kept by the DHS, and one provided to the patient. The patient's copy would identify them as being eligible and would also explain what the program covers.

When a person needs a physician they would call the WATS number and be referred to a volunteer primary care physician in their area. The patient would be responsible for contacting the physician's office the same as any other patient. The physician would agree to see the patient at no charge. Any further arrangements would be between the patient and physician. If the physician does not want to see the patient again, he would advise him/her to call the WATS number for further care. Each time a referral is made, the physician's name would go to the bottom of the list. Should the patient need care beyond that which can be provided by the primary care physician, the primary care physician would call the WATS number to obtain the name (or names) of participating specialists needed to treat the patient.

If a patient needs to be admitted to the hospital, the physician would call the WATS number to find out if their local hospital agreed to work with the program.

The foundation office would not call physicians nor make appointments; this would be the responsibility of the patient. In addition, this program would not be designed to take care of emergency cases. Any calls pertaining to a potential emergency would be referred to the nearest hospital emergency room.

Health Education Resolution

Whereas, the members of the Arkansas Medical Society being acutely aware of the teenage pregnancy problem in our State and of the potential for harmful disease transmission by an uninformed, yet sexually active teenage population; therefore be it

Resolved, that we do hereby endorse and lend our support to the efforts of the Arkansas Department of Health under the direction of Dr. Joycelyn Elders to provide accurate, understandable and timely health information to all Arkansas teenagers; and be it further

Resolved, that we firmly believe that appropriate health education will result in more intelligent health decisions by these individuals, and as a collective consequence lead to a more prosperous future for the youth of Arkansas.

By order of the AMS Committee on AIDS
William N. Jones, Chairman

FROM OTHER YEARS

Claibourne Watkins, M.D. (1844-1908) Soldier, Physician-Surgeon, Professor

*Calvin Hanna, Ph.D.**

Claibourne Watkins was born in Little Rock on March 2, 1844, the son of Mary Crease Watkins (married 1841, died 1855) and George Claibourne Watkins, Esq. The second of four boys, he received his early education in Little Rock public schools.¹ His father was a lawyer and civic leader who became the third Chief Justice of the Supreme Court of Arkansas in 1851.² The senior Watkins later married the widowed Sophia Curran and the family lived in Curran Hall.³ This home is still occupied in the Quapaw Quarter in Little Rock.

Master Claibourne entered college in Baltimore in 1860 where he majored in literature and science,³ but his education was abruptly altered by political events. The Republican party nominated Abraham Lincoln in Chicago for president while the Democratic party did the same for Senator Stephen A. Douglas of Illinois in Charleston, South Carolina. By summer, the Democrats changed their minds and split into three factions, all meeting in Baltimore. The regular Democrats continued with Senator Douglas, the "Seceders' Convention" nominated Vice President John Cabell Breckinridge and the New Constitutional Union Party elected John Bell. Some of these conventions met at the Maryland Institute (College) and most likely Master Claibourne and his fellow students heard the issues and met the candidates. However, no party received a majority of the votes and Lincoln was elected. Lincoln passed through Baltimore in 1861 on his way to Washington while young Watkins headed for Arkansas.³

The Confederate State of America (CSA) was formed in early 1861 and the Arkansas CSA regiments began training. Private Claibourne joined Colonel Jabez M. Smith's CSA regiment while his older brother, Patrick, enlisted in Colonel Claibourne's CSA regiment.³ Later, Arkansas joined the

War of Southern Independence and the Watkins' brothers marched north to Missouri and Kentucky.

After a series of successes, the northern boundary of the Confederate States extended from southern Missouri and across Kentucky. Early in 1862, Brigadier-General Ulysses S. Grant floated an army from Cairo, Illinois, down the Cumberland River capturing forts on that and the Tennessee River. To compensate for their loss of forts, Pierre G. T. Beauregard, the CSA's first officer to attain the rank of General, evacuated Columbus and fortified Island No. 10 on the Mississippi River. Colonel Jabez M. Smith's regiment moved to Island No. 10 while Claibourne's regiment marched into Tennessee.^{1,2,3} That spring Brigadier-General Pope's army left Cairo and laid siege to Island No. 10. After a month Smith's regiment surrendered and six months later, the regiment was exchanged. After their release the regiment moved to the Louisiana-Mississippi Theater under Brigadier-General Sterling Price. In 1862, Vicksburg, Mississippi, was attacked and Claibourne Watkins' troopers moved to fortify Port Hudson, Louisiana overlooking the Mississippi River. This fort blocked the river and a federal army from New Orleans was unable to reach Vicksburg to help General Grant in his effort to take the city. Port Hudson was cut off in the Spring of 1863 and underwent siege.¹ After six weeks of daily fighting, the Port gave up four days after the fall of Vicksburg in July of 1863.

Prisoner Watkins was interned in New Orleans only to escape and join General Robert Taylor's army at Mobile Bay, Alabama. After further combat Captain Claibourne Watkins of the CSA Calvary surrendered about a month following the surrender of General Robert E. Lee. Claibourne's brother, Patrick, fought through Tennessee and was unscratched after eighteen engagements.^{2,3} However, during the Battle of Atlanta, Georgia, Brigadier-General Patrick Watkins was killed. Former Captain Claibourne Watkins returned to Little Rock where he began a career, only to have it interrupted by another "war."⁵

Department of Pharmacology, University of Arkansas for Medical Sciences, 4301 West Markham, Little Rock, Arkansas 72205.

Medical Career

Young Claibourne Watkins worked for several years at the U.S. Government Hospital as a preceptor. He then returned east to continue his education at the Jefferson Medical College in Philadelphia.³ One of his teachers was Samuel David Gross, M.D., who was considered to be the greatest American surgeon. His book on anatomy is still in use. At this time students were taught of the successes of Jenner and Pasteur in the prevention of certain diseases by inoculations. Surgery was carried out under a mist of carbolic acid as recommended by Lister. However, the curriculum was devoted mainly to physiology and anatomy. Claibourne passed these subjects in 1868 and received a medical degree in allopathic medicine. He attended the famous New York Polyclinic before returning to Little Rock.³

Dr. Claibourne Watkins set up a circuit practice covering a day's horseback ride from Little Rock and later established a large drug store.³ His office was located at 111 E. 5th Street, and his residence was only a few blocks away at 300 E. 5th Street.⁴ The allopathic physicians employed heroic methods such as blood-letting to lower the body temperature in the treatment of fever. Their opposing group, the irregular physicians (the botanical, eclectic, homeopathic and physic physicians) usually employed plant products or mineral salts to treat symptoms of disease. The irregular physicians, sometimes called "heretics," had formed their Arkansas medical societies. A group of allopathic physicians formed the Little Rock and Pulaski County Medical Society in 1866. When Dr. Watkins joined this group he became their corresponding secretary and in 1870 he sent out a call for allopathic physicians to establish the Arkansas State Medical Association.⁵ His friend and fellow graduate of Jefferson Medical College, Philo Oliver Hooper, M.D., was elected president of the association. This new society attempted to establish a medical school at St. John's College in Little Rock, petitioning the Arkansas Legislature for help. One act of the legislature was to release unclaimed bodies for anatomical inquiry, but the medical school never materialized.⁵

The Honorable George Claibourne Watkins became ill in the early 1870's. His son, Claibourne, attended to his father. Later, he took his father for treatment to the hot springs of Virginia and then to the hot springs of Colorado. While in St. Louis on their way home, the elder Watkins died on December 7, 1872. The State of Arkansas went into mourning and the city of Little Rock named a street in his honor^{2,3} (Watkins Street later became 14th Street).

A year after his father's death, Claibourne married Mildred Farley of Mississippi in St. Louis.³ The union resulted in four daughters and, years later, debutante parties were given for each.

In 1872, Dr. Watkins nominated Almond Brooks, M.D., of Hot Springs to the county and state medical associations⁵, beginning what was sometimes referred to as the "Brooks War" (unrelated to the Brooks-Baxter War). Both Watkins and Brooks were trained in chemistry and Brooks was



Dr. Watkins was a respected personage and was known for his stylish attire. He was seldom pictured without his monocle.⁵

offered the Professor of Chemistry position at the Memphis Medical School. Two physicians in Hot Springs opposed the nomination, specifying irregularities in the writing of prescriptions.⁵ In 1873, after months of argument, thirteen members of the Little Rock and Pulaski County Medical Society, led by Dr. Hooper, withdrew to form the new Little Rock College of Physicians and Surgeons and, in October of 1875, the State Medical Society of Arkansas. William B. Welch, M.D., of Washington County, was the first president. In 1876, the fledgling American Medical Association recognized the society.⁵

The split between the allopathic physicians was consistent with the changes taking place in the Southern States after the Military Reconstruction Act. These states had been governed by Republicans, including former National Soldiers, some northern adventurers, the so-called Scalawags, or carpetbaggers and former slaves. This government began a frantic program of aid to higher education and the construction of railroads, highways, and long distance communications. Soon, the Republican party split into the Elisha Baxter (minstrels) and Reverend Joseph Brooks (bringle tails) parties in 1872. After the 1873 election, both parties claimed victory, and like Louisiana, there were two governors. Unlike Louisiana, Arkansas had only one legislature. Governor Baxter armed a group of men and stationed them at the St. John's College while Governor Brooks armed another group of men. Soon the so-called Baxter-Brooks War was on throughout the state. President U.S. Grant entered the arena and certified Elisha Baxter as governor and the Republican organization soon declined in influence. Unfortunately, St. John's College fell out of favor with the electorate, so when Dr. Hooper sought to establish a medical school at this college in 1879, he failed.³ In the meantime, he obtained the

Arkansas Industrial University of Washington County as sponsor of a medical department. The new department was to be free standing and a group of former rivals, including Claibourne Watkins, M.D., put up needed funds under Dean of the Faculty Professor Hooper.³ School began in the fall of 1879 in Little Rock with Professor Watkins teaching chemistry. At the new medical department, Professor Watkins taught chemistry and toxicology for two years and then became Professor of the new Institutes of Medicine.⁶ He held this position until he retired in 1905.

Physiology in the 1880's began a rapid growth in the understanding of bodily functions. The discipline was soon split into many subjects: physiological chemistry, physiological pathology, microbiology and medicine. With the sudden availability of fast communications and travel, many physicians accumulated new information and tried new techniques. Soon the teaching of heroic therapies were replaced by less severe procedures, usually based on the origin of the disease being treated. The distinction between medical training in various medical schools was lessened and the training was based on physiology and anatomy.

In the 1880's, Professor Watkins joined the State Medical Society and hosted the Little Rock meeting of the group. His contributions were to the Section on Practice of Medicine.⁷⁻¹² He pushed for sterile techniques in surgery, championed the use of peroxide in the place of carbolic acid, and recommended a study of infections and of vaccinations to prevent smallpox. He was one of the first surgeons to successfully remove an appendix.⁸ He was outdone, however, by a fellow surgeon who extracted an ovarian cyst weighing approximately eighty pounds.¹⁰

The advances in physiology, medicine and surgery continued at a rapid pace by the turn of the century. Dr. Watkins was well-versed in this new knowledge, and he wrote a series of papers on many aspects of medicine.⁷⁻¹³

The 1890 meeting of the State Medical Society of Arkansas was held in Fayetteville, and was hosted by William B. Welch, M.D. Only Drs. Welch and Hooper were left of the original founders of the Society. Claibourne Watkins, M.D.,

was the unanimous nominee for president of the Society that year. His comments on acceptance began with, "I was literally knocked out - I did not seek this position." His presidential speech the next year enjoined his colleagues to use specific techniques in the prevention and treatment of disease. Most of his charges to his audience still apply today.

Dr. Watkins suffered a stroke in 1905 which ended his medical career, and he died in 1908. He is buried in Mt. Holly Cemetery. Only a few paragraphs have been written about Dr. Watkins, yet he practiced and taught through a period of rapid medical change¹⁴ which began with hot spring baths, herbs, arsenic and mercuric compounds and progressed to the rational application of physiology to the diagnosis, therapy and surgical treatment of disease.

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THINGS TO COME

JANUARY 12-15

Current Concepts in Pediatrics. Sponsored by the AAP Colorado Chapter. Marriott's Mark Resort, Vail, Colorado. Sixteen Category I credit hours. Fee: AAP Resident Fellow, \$220; AAP Candidate Fellow, \$220; AAP Fellow, \$300; Non-member physician, \$365; Allied Health Professional, \$220. For further information, contact CME Registration, Department of Pediatrics, AAP, Post Office Box 927, Elk Grove Village, IL 60009-0927; 1-800-433-9016; extension 7657.

JANUARY 14-15

Automated Percutaneous Discectomy Workshop. Sponsored by Radiology Postgraduate Education, University of California. Marriott Marco Island Resort, Marco Island, Florida. Eleven Category I hours available. Fee: \$1,000. For registration information, call (415) 476-5808; program information call (415) 476-5731.

JANUARY 21-22

Breast Imaging Update. Sponsored by Radiology Postgraduate Education, University of California. Hyatt Regency Hotel, San Francisco, California. Fourteen Category I hours available. Fee: \$295, physicians; \$195, residents, fellows, technologists and nurses with letter of verification. For registration information, call (415) 476-5808; program information call (415) 476-5731.

JANUARY 23-27

Diagnostic Radiology. Sponsored by Postgraduate Education, University of California. Ixtapa, Mexico. Twenty-five Category I hours available. Fee: \$495, physicians; \$395, residents, fellows, technologists and nurses with letter of verification. For registration information, call (415) 476-5808; program information call (415) 476-5731.

FEBRUARY 10-12

Current Concepts in Pediatric Medicine. Sponsored by the AAP Colorado Chapter. San Diego Marriott and

Marina, San Diego, California. Eighteen Category I credit hours. Fee: AAP Resident Fellow, \$220; AAP Candidate Fellow, \$220; AAP Fellow, \$300; Non-member physician, \$365; Allied Health Professional, \$220. For further information, contact CME Registration, Department of Pediatrics, AAP, Post Office Box 927, Elk Grove Village, IL 60009-0927; 1-800-433-9016; extension 7657.

FEBRUARY 19-24

Twentieth Family Medicine Review - Session I. Sponsored by the University of Kentucky, College of Medicine. Lexington, KY. AMA Category I credit available. For further information, call Joy Greene, (606) 233-5161.

FEBRUARY 19-24

Diagnostic Imaging Update: 1989. Sponsored by Postgraduate Education, University of California. Park City, Utah. Twenty-three Category I hours available. Fee: \$495, physicians; \$395, residents, fellows, technologists and nurses with letter of verification. For registration information, call (415) 476-5808; program information call (415) 476-5731.

FEBRUARY 25-26

Automated Percutaneous Discectomy Workshop. Sponsored by Radiology Postgraduate Education, University of California. Hyatt Regency Hotel, Embarcadero, San Francisco, California. Eleven Category I hours available. Fee: \$1,000. For registration information, call (415) 476-5808; program information, call (415) 476-5731.

FEBRUARY 25-MARCH 4

Winter Seminar. Sponsored by the Medical Education Department of Baptist Medical Center. Snowmass, Colorado. Twenty Category I credit hours. Fee: \$200, physicians; \$100, nurses and other healthcare professionals. For further information, write Medical Education Department, Baptist Medical Center, 9601 Interstate 630, Exit 7, Little Rock, Arkansas 72205-7299; or call (501) 227-2672.

Cholesterol: Current Concepts for Physicians

Self-Study Course for Physicians. Sponsored by the National Health, Lung and Blood Institute. A national cholesterol education program is available through the Arkansas Medical Society office in which a physician studies at home. Two hours Category I credit. Further information: David Wroten, Arkansas Medical Society, P. O. Box 5776, Little Rock, AR 72215; (501) 224-8967.

Internal Medicine Conference

January 10, 1989, 12:30 p.m. Presented by L.C. Price, M.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Tumor Conference

January 17, 1989, 12:00 noon. Presented by Terry Holt, M.D. Sponsored by AHEC - Fort Smith. Seventh Floor Dining Room, Sparks Regional Medical Center. One Category I credit hour.

Geriatrics Seminar

January, 20, 1989. Sponsored by Baptist Medical Center. For further information, contact BMC Medical Education, (501) 227-2672.

Pediatric Allergies

January 24, 1989, 12:30 p.m. Presented by J. T. Howell, M.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Poison Treatment & Prevention

January 26, 1989, 12:00 noon. Presented by Greg Kearnes, Pharm D. Sponsored by AHEC - Fort Smith.

Seventh Floor Dining Room, Sparks Regional Medical Center. One Category I credit hour.

Internal Medicine Conference

February 7, 1989, 12:30 p.m. Presented by L.C. Price, M.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Childhood Seizures

February 8, 1989, 12:00 noon. Presented by Stephen Bates, M.D. Sponsored by AHEC - Fort Smith. Seventh Floor Dining Room, Sparks Regional Medical Center. One Category I credit hour.

OB Lecture Series

February 13, 1989, 1:00 p.m. Presented by William Harrison, M.D. Sponsored by AHEC - Northwest. AHEC-NW, 241 W. Spring, Fayetteville. One Category I credit hour.

Cardiology Seminar

February 24, 1989. Sponsored by Baptist Medical Center. For further information, contact BMC Medical Education, (501) 227-2672.

Winter Seminar 1989

February 25 - March 4, 1989. Presented by Baptist Medical Center CMS Programs. The Crestwood, Snowmass, Colorado. 20 Category I credit hours. Fees: \$200, physicians; \$100, nurses and other healthcare professionals. For further information contact, BMC Medical Education, (501) 227-2672.

Recurring Education Programs

As organizations accredited for continuing medical education by the Arkansas Medical Society, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), each Friday, 12:15 p.m., Conference Room, Building 1, VAMC
Mortality/Morbidity Conference, fourth Wednesday, 2:45 p.m., Conference Room, Building 1, VAMC

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon, varying topics, alternating Fridays, 12:30 p.m., Classrooms, AMI National Park Medical Center

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom

General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom

Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457

Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121

Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium

Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Second Floor Classroom

Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom

Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom

Pediatric Pharmacology Conference, fifth Wednesday, 12:00 noon, Second Floor Classroom

Pediatric Radiology Conference, first Thursday, 12:00 noon, Second Floor Classroom

Pediatric Research Conference, third Monday, 12:00 noon, Sturgis Building, Rooms S120-121

Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium. A meal is provided.

Cancer Conference, third and fourth Thursday, 12:00 noon, Southwestern Bell Room A meal is provided.

General Medicine Journal Club, each Tuesday, 12:00 noon, Petit Jean Room. Bring your own lunch.

Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library. A meal is provided.

Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Maumelle Room. Refreshments are provided.

Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory. Refreshments are provided.

Pediatric Conference, first Tuesday, 12:30 p.m., Maumelle Room. A meal is provided.

Peripheral Vascular Disease Conference, fourth Tuesday, 6:00 p.m., Maumelle Room. A meal is provided.

Pulmonary Conference, second and fourth Wednesday, 12:00 noon, DeSoto Room. A meal is provided.

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1

Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and case presentations. A light lunch is provided.

Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library

Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium. A light lunch is provided.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category 1 of the Physician's Recognition Award of the American Medical Association.

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES - LITTLE ROCK

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University

ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137

Anesthesia Conference Series, times and dates vary, UAMS Education Building, Room G/110 A&B

Anesthesia Morbidity and Mortality Conference, every second and fourth Tuesday, 6:45 a.m., UAMS Education Building, Room G/110 A&B. Every first, second and third Thursday, 4:00 p.m., Room G/112 A&B.

Child Psychiatry Clinical Case Conference, first Friday, 1:00 p.m., UAMS Child Study Center Conference Room.

Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B

Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium

Medicine Research Conference, each Wednesday, 4:30 p.m. Shorey Building, Room 3506

Neurology Clinical Case Conference, three or four Thursdays per month, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.

Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (7D33) and LRVAMC (Autopsy Room).

Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7D33.

Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B

Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.

Orthopaedic Basic Science Conference, occasional Tuesdays, 11:00 a.m., UAMS Education Bldg., Room B/135.

Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135

Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135

Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135

Psychiatry Grand Rounds/Clinical Case Conference, each Friday, 11:00 a.m., UAMS Shorey Auditorium

St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building, Room 159

Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A

Surgery Morbidity and Mortality Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A.

Surgery Resident Case Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A

Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A

Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS

Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC

Urology Morbidity and Mortality Conference, last Wednesday, 5:00 p.m., UAMS

Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS

VA Diagnostic Imaging Conference, every Tuesday, Wednesday and Thursday, 8:00 a.m., LRVA Nuclear Medicine Conference Room, Room 1D173

VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., NLRVA, Building 66, Room 38

VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., NLRVA Building 89, Conference Room, or Arkansas Rehab Institute
 VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
 VA Surgery Service General Chest Topics (Combined Surgery/Medicine Lung Conference), every other Monday, 12:15 p.m., LRVA, Room 2D109.
 VA Surgery Service Lung Cancer Conference, every Tuesday, 3:00 p.m., LRVA, Room 2E142.
 VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
 VA Weekly Tumor Conference, each Tuesday, 1:00 p.m., VAMC, Room 2D109

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
 Chest Conference, third Wednesday, 12:30 p.m., Wamer Brown Hospital
 Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
 Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
 Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
 Pediatric Conference, third Friday, 12:15 p.m., Union Medical Center.
 Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
 Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
 Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

Cardiology Lecture Series, first Monday, 1:00 p.m., Washington Regional Medical Center
 City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital
 Family Medicine Conference, varying dates through January and February, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville. Contact AHEC - NW for list of dates.
 Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
 Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
 Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
 Cherokee Village Tumor Conference, third Monday, every four months, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village.
 Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
 Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
 Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
 Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, MO
 Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
 Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
 Neurological-Neurosurgical Conference, first Monday, 12:00 noon, St. Bernard's Dietary Conference Room
 Neuroradiology Conference, second Friday, 12:00 noon, St. Bernard's Dietary Conference Room
 Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
 Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
 Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
 Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
 Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
 Wynne Tumor Conference, third Tuesday, 6:00 p.m., Grecian Steak House, Wynne, every four months.

PINE BLUFF-AHEC

Behavioral Science Conference, first and third Thursday, 12:30 p.m., Jefferson Regional Medical Center
 Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
 Family Practice Conference, first and fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
 Geriatrics Conference, third Friday, 12:30 p.m., Jefferson Regional Medical Center
 Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
 Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
 Orthopedic Case Conference, second and fourth Thursday, 12:30 p.m., Jefferson Regional Medical Center.
 Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
 Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
 Southeast Arkansas Medical Lecture Series, fourth Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
 Surgery Conference, first Friday, 12:30 p.m., Jefferson Regional Medical Center
 Tumor Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Cardiology Conference, alternating Fridays, 11:30 a.m., St. Michael Hospital
 Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital.
 Cine Radiology, second Friday, 12:00 noon, Wadley Regional Medical Center.
 Echo-Cardiology, fourth Friday, 12:00 noon, Wadley Regional Medical Center
 Internal Medicine Conference, second Tuesday, 12:00 noon, St. Michael Hospital
 Neuro-Radiology Conference, second and fourth Wednesday, 7:00 a.m. breakfast, Wadley Regional Medical Center
 Surgeons Pathology Conference, varying dates, 7:00 a.m. breakfast, Wadley Regional Medical Center
 AHEC Tumor Conference, first Wednesday, 7:00 a.m. breakfast, St. Michael Hospital

AMS NEWSMAKERS

Dr. John Brunner has been elected to the board of directors of First National Bank of Hot Springs. Dr. Brunner is a general and thoracic surgeon in Hot Springs.

Diabetic retinopathy was the topic at the recent meeting of the Arkansas River Valley Chapter of the American Diabetes Association. **Dr. Joe Lyford**, a Russellville ophthalmologist, was the speaker.

The Arkansas Cancer Research Center has received a \$100,000 contribution from J. B. and Johnelle Hunt and J. B. Hunt Transport, Inc., of Lowell, according to **Kent C. Westbrook, M.D.**, ACRC Director. The gift will be used for the construction of a quiet room/chapel for families and patients of ACRC.

The American College of Surgeons recently awarded **Dr. Frank Padberg** its highest honor, the Distinguished Service Award. Dr. Padberg has been in clinical practice in neurological surgery in Little Rock since 1952, and has been a professor at the UAMS.

Dr. Joe Verser, a Harrisburg physician and State Medical Board secretary, was honored at the annual Harrisburg Chamber of Commerce banquet. Dr. Verser and his family were honored for their contributions to the

economic development of the community and for their many years of medical service to the people.

It was recently announced that the **Sebastian County Medical Society** has donated \$5,000 to the Arkansas Children's Hospital. Dr. Charles Floyd, president of the county society, said the donation would be used by the hospital's Children at Risk Program to disseminate information on diagnosing and treating cases of child sexual abuse.

The American Academy of Family Practice recently released the names of its newest fellows. **Dr. John G. Scott** of Batesville, **Dr. Michael C. Hendren** of Russellville, and **Dr. Donald L. Cohagan** of Bentonville, all were named fellows of the AAFP.

Dr. David L. Barclay, past president of the Pulaski County Medical Society, recently returned from Novi Sad, Yugoslavia, where he was awarded honorary membership in the Yugoslav Society of Obstetricians-Gynecologists. Dr. Barclay is a Little Rock gynecologist.

The American Board of Family Practice recently certified **Dr. Clifford A. Boswell** of Clarksville as a diplomate of the board.

NEW MEMBERS

BENTON COUNTY MEDICAL SOCIETY

Treptow, Douglas A., General Surgery, Rogers. Born December 10, 1956, Bassett, NE. Pre-medical education, Kearney State College, Kearney, NE, B.S., 1979. Medical education, University of Nebraska, Omaha, 1983. Internship/residency, University of Kansas, Wichita, KS. Board eligible.

CRAIGHEAD-POINSETT COUNTY MEDICAL SOCIETY

Woloszyn, John T., Orthopaedic Surgery, Jonesboro. Born December 29, 1956, Port Chester, NY. Pre-medical education, Fairleigh Dickinson University, B.S., 1979. Medical education, UHS Chicago Medical School, 1983. Internship, Mt. Carmel Mercy Hospital. Residency,

Metropolitan Northwest Detroit Hospitals, Inc. Board eligible.

FAULKNER COUNTY MEDICAL SOCIETY

Jackson, Carole B., Obstetrics-Gynecology, Conway. Born October 29, 1954, Nashville, AR. Pre-medical education, University of Arkansas, Fayetteville, B.A., 1976. Medical education, University of Arkansas for Medical Sciences, 1980. Internship/residency, UAMS. Practice experience, Conway, 9 months. Member, ACOG.

Throneberry, James B., Family Practice, Conway. Born September 14, 1956, Abilene, TX. Pre-medical education, University of Central Arkansas, 1979. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/residency, Jefferson Regional Hospital.

Practice experience, Conway, 10 months. Teaching appointments, University of Central Arkansas, Biology. Member, AAFP.

INDEPENDENCE COUNTY MEDICAL SOCIETY

Simpson, Ronald W., Family Medicine, Mountain View. Born February 14, 1956, Detroit, MI. Pre-medical education, Arkansas State University, B.S., 1979, M.S. 1981. Medical education, University of Arkansas for Medical Sciences, 1985. Internship/residency, UAMS. Board certified, Family Practice. Member, AAFP.

JEFFERSON COUNTY MEDICAL SOCIETY

Lytle, John O., Orthopaedic Surgery, Pine Bluff. Born February 8, 1957, Little Rock. Pre-medical education, University of Arkansas, B.S., 1978. Medical education, University of Arkansas for Medical Sciences, 1982. Internship/residency, UAMS. Teaching appointments, Fellowship Service du Professor Emile Letournel, Paris, France, Centre medico Chirurgical de la Porte de Choisy. Chief Resident, UAMS Orthopaedic Surgery.

JOHNSON COUNTY MEDICAL SOCIETY

Boswell, Clifford A., Family Practice, Clarksville. Born August 18, 1952, Batesville. Pre-medical education, University of Arkansas at Little Rock, B.A., B.S. Medical education, University of Arkansas for Medical Sciences, 1985. Internship/residency, UAMS AHEC - Pine Bluff. Military record, USAF, 1971-73. Member, AAFP.

POLK COUNTY MEDICAL SOCIETY

Tinnesz, Thomas J., General Surgery, Mena. Born October 15, 1953, New Jersey. Pre-medical education, Seton Hall University, M.S., 1975. Medical education, Universidad Autonoma De Guadalajara, 1979. Internship, St. Michael's Medical Center, Newark, NJ. Residency, University of Medicine and Dentistry, Newark, NJ. Practice experience, 2 years, Mena, AR. Board certified. Member, International College of Surgeons.

PULASKI COUNTY MEDICAL SOCIETY

Abel, Lee C., Internal Medicine, Little Rock. Born July 14, 1952, Atlanta, GA. Pre-medical education, Emory College, B.A., 1974. Medical education, Emory University School of Medicine, 1978. Internship, St. Vincent's Hospital & Medical Center of New York. Residency, Boston V.A. Medical Center, Boston, MA. Board certified, Internal Medicine.

Flanigan, William J., Nephrology-Transplantation, Little Rock. Born June 2, 1930, Hot Springs, AR. Pre-medical education, Hendrix College, 1951. Medical education, University of Arkansas for Medical Sciences, 1955.

RESIDENT PHYSICIAN SECTION

Aaronson, Steven P., Emergency Medicine. Born Salt Lake City, UT. Pre-medical education, University of Colorado, Boulder, B.A., 1981. Medical education, St. Louis University, St. Louis, MO, 1987. Internship, Oregon Health Sciences University, Portland, OR. Residency, UAMS.

Carpenter, Charles E., Emergency Medicine. Born June 7, 1962, Las Vegas, NV. Pre-medical education, Midwestern State University, Wichita Falls, TX, B.S., 1983. Medical education, Southwestern Medical School, Dallas, TX 1987. Internship, Baylor University Medical Center, Dallas, TX. Residency, University of Arkansas for Medical Sciences.

Cleveland, Elton R., Family Practice. Born February 22, 1951, Paris, AR. Pre-medical education, University of Arkansas, Fayetteville, B.S., 1973; Oklahoma State University, Stillwater, OK, 1977. Medical school, University of Arkansas for Medical Sciences, 1987. Internship/residency, UAMS.

Garmer, D. Joe., Radiology. Born April 19, 1956, Little Rock. Pre-medical education, Tulane University, B.S., 1977; University of Arkansas, M.S., 1982. Medical school, University of Arkansas for Medical Sciences, 1986. Residency, UAMS.

Gruber, Robert D., Physical Medicine and Rehabilitation. Born March 30, 1960, Pittsburg, KS. Pre-medical education, Florida State University, Tallahassee, FL, B.S., 1982. Medical school, Southeastern College of Osteopathic Medicine, Miami, FL, 1986. Internship, Dallas Family Hospital, Dallas, TX. Residency, UAMS.

Holland, Rhonda J., Pediatrics. Born January 6, 1956, Montrose, CO. Pre-medical education, University of Oklahoma, Norman, B.S., 1977. Medical education, University of Oklahoma, Oklahoma City, 1982. Internship, University of Oklahoma. Residency, UAMS.

Hurley, Timothy J., Obstetrics-Gynecology. Born January 14, 1958, New York. Pre-medical education, Adams State College, Alamosa, CO, 1981. Medical school, University of New Mexico, Albuquerque, 1986. Residency, UAMS.

Johnson, Donna D., General Surgery. Born September 21, 1952, Savannah, GA. Pre-medical education, University of Arkansas for Medical Sciences, B.S., 1981. Medical education, UAMS, 1988. Internship/residency, UAMS.

Lincoln, Lance R., Medicine. Born October 4, 1960, Forrest City. Pre-medical education, Arkansas Tech University, Russellville, B.S., 1983. Medical school, University of Arkansas for Medical Sciences. Internship/residency, UAMS.

Melpus, William M., Radiology. Born November 14, 1962, Hattiesburg, MS. Pre-medical education, Mississippi State University, Starkville, M.S., 1984. Medical education, University of Mississippi, Jackson, 1988. Residency, UAMS.

Morrison, Lynn C., Pediatrics. Born April 22, 1959, Allentown, PA. Pre-medical education, Hendrix College, Conway, B.A., 1981. Medical education, University of Arkansas for Medical Sciences, 1988. Internship/residency, UAMS.

Mourot, Susan G., Family Medicine. Born December 9, 1956, Starkville, MS. Pre-medical education, Mississippi University for Women, Columbus, B.S., 1978. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/residency, UAMS.

Owen, K. Kip, Orthopaedics. Born April 29, 1953, Fort Worth. Pre-medical education, U. S. Naval Academy, Annapolis, MD, B.S., 1975. Medical education,

Texas A & M College of Medicine, College Station, 1988. Internship/residency, UAMS.

Palesano, Richard L., Otolaryngology. Born March 14, 1962, Lawton, OK. Pre-medical education, Cameron University, Lawton, OK, B.S., 1984. Medical education, Oklahoma University College of Medicine, Oklahoma City, 1988. Internship, UAMS.

Schmucker, N. Kathleen, Dermatology. Born March 24, 1960, Cambridge, England. Pre-medical education, Southwestern at Memphis (Rhoades College), B.S., 1981; UAMS, M.S., 1984. Medical education, UAMS, 1988. Internship/residency, University of Arkansas for Medical Sciences.

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Sullenberger, A. G.
Sweatt, John
Tanner, Ronald D.
Tisdale, Alfred D. Jr.
Toatley, Donald U.
Townsend, Thomas E.
Tracy, C. Clyde
Waheed, Atiya N.
Walajahi, Fawad H.
Waller, Franklin W.
Watson, Charles

Watson, Kirk D.
Watson, Vye B.
Wilkins, Walter J. Jr.
Wineland, Herbert L.
Worrell, Aubrey M. Jr.

JOHNSON

Boswell, Clifford A.
Goodman, James David
McAuley, John R.
McKelvey, Richard E.
Pennington, Donald H.
Shrigley, Guy P.

LAFAYETTE

Lee, Willie J.
Patton, Robert C.

LAWRENCE

Hughes, Joe E.
Joseph, Ralph F.
Lancaster, Ted S.
Langley, Michael G.
Quevillon, Robert D.
Spades, Sebastian A. III

LEE

Balke, Susan W.
Fields, E. C.
Gray, Dwight W.
Ly, Duong N.

LITTLE RIVER

Armstrong, James D.
Dalby, Robert D.
Peacock, Norman W. Jr.
Shelton, Joe G. Jr.
Wade, Billy K.

LOGAN

Buckley, Douglas A.
Chalfant, Charles H.
Daniel, William R.
Enns, Wayne P.
Harbison, James D.
Hutson, Sanford E. III
Roberts, William J.
Smith, James T.
Ulrich, Guy
Williams, John R.

LONOKE

Abrams, Joe A.
Anderson, Leslie F.
Braswell, Thomas R.
Chapman, Jerry C.
Gartman, Joseph F.
Harris, Willie R.
Holmes, Byron E.
Inman, Fred C. Jr.
Schumann, Gerald M.
Washburn, C. Yulan

MILLER

Andrews, A. E. Jr.
Barnes, Walter C. Jr.
Blankenship, D. Michael
Burns, Billy R.
Burroughs, James C.

Chipman, Dennis C.
Contreras, Freddie Lee
Cutler, Otis
Deskin, Roy L.
Dildy, Edwin V. Jr.
Ditsch, Craig E.
Druff, Gerald H.
Duncan, Donald L.
Eichler, Edward A. Jr.
Ford, John Suffern
Fournier, Donald C.
Gilbert, Arnold
Gillelan, John A.
Graham, John
Hall, Eric E.
Hall, Jon D.
Harrell, William B. Jr.
Harris, C. Lynn
Harrison, Jack W.
Hillis, Thomas M.
Hughes, A. Keith
Hughes, R. Paul
Hutcheson, Fred A. Jr.
Jean, Alan B.
Jones, John W.
Joyce, Frederick E.
Kemp, Karlton H.
Kittrell, James B.
Leavelle, Ray W.
Loe, Arlis W.
Mayo, Russell
McGinnis, Robert S. Sr.
Meredith, Paul D.
Newton, Norris L.
Newton, Norris L. Jr.
O'Banion, Dennis
Osborn, Roger C. Jr.
Peebles, Larry M.
Price, Edwin F.
Ridout, Robert M. Jr.
Robinson, John
Rountree, Glen A.
Royal, Jack L.
Sarrett, James
Shaffer, William L.
Shipp, G. Carl
Smith, Arnett D. Jr.
Smolarz, Gregory J.
Solomon, J. Alan
Somerville, Patrick J.
Stringfellow, Jerry B.
Thornton, Charles N.
Tompkins, W. C. Jr.
Warren, William S. Jr.
Wilhelm, Frieda
Wilson, Thomas Laurence
Wren, Herbert B.
Wright, James O. III
Yarbrough, Charles P.
Young, Mitchell

MISSISSIPPI

Abraham, Anes Wiley
Abramson, Lawrence J.
Bell, Mary C.
Biggerstaff, Jerry R.
Brock, Charles C. Jr.
Campbell, Charles E. Jr.
Canale, James L.
Cole, Cecil R.
Cullom, Sumner R.

Elliott, John Q. #
Fairley, Eldon
Fenaughty, Francis J.
Fergus, R. Scott
Hart, Sybil R.
Haynes, Max G.
Higley, George B. Jr.
Holcomb, Cecil E.
Hubener, Louis F.
Hudson, James H.
Husted, G. Scott
Jones, Herbert
Jones, Joseph V.
Melton, Clinton G.
Osborne, Merrill J.
Oster, Catherine J.
Pollock, George D.
Rauls, Stephen R.
Rhodes, R. F.
Rodman, T. N.
Russell, James D.
Sammons, L. C. Jr.
Sellers, Kenneth D.
Shaneyfelt, E. A.
Sims, Hunter C. Jr.
Smith, Ronald D.

MONROE

David, Neylon C. Jr.
Pham, Dac Tat
Pupsta, Benedict F.
Stone, Herd E. Jr.
Walker, Walter L.

NEVADA

Crow, H. Blake
Peebles, George R.
Vermont, Charles A.

OUACHITA

Braden, Lawrence F.
Brunson, Milton
Dedman, J. L. Jr.
Dedman, William D.
Dobson, Jack T.
Fohn, Charles H.
Forward, Robert B.
Guthrie, James
Hout, Judson N.
Jameson, John B. Jr.
Kendall, Jerry R.
Miller, John H.
Nunnally, Robert H.
Ozment, L. V.
Parkman, Robert L. Jr.
Posey, David L.
Sanders, Cal R.
Thorne, Arthur E.
Tyson, Samuel T.

PHILLIPS

Barrow, John H. Jr.
Bell, L. J. Patrick
Berger, Alfred A.
Elovitz, Maurice J.
Faulkner, Henry N.
Frederick, William Ronald
Kirkman, C. M. T.
McCarty, Charles P.
McCarty, Gordon E. Jr.

McDaniel, Marion A.
 Miller, Robert D. Jr.
 Paine, William T.
 Patton, Francis M.
 Rangaswami, Narayanaswami
 Robirds, David Mark
 Vasudevan, Kanaka
 Vasudevan, P.
 Wise, James E. Jr.

POLK

Finck, John Henry
 Fried, David D.
 George, Anthony D.
 McClard, P. Helen
 Mesko, John D.
 Rogers, Henry N.
 Wood, John P.

POPE

Ampil, Federico L.
 Ashcraft, Ted E.
 Austin, Nathan F.
 Bachman, David S.
 Barron, William G.
 Barton, A. Dale
 Battles, Larry D.
 Berner, Dennis W.
 Birum, Patricia J.
 Bost, R. Kingsley
 Bradley, Stanley C.
 Brown, Charles H.
 Burgess, James G.
 Carter, James M.
 Cloud, Joe A.
 Crumpler, Joe B. Jr.
 Dunn, Donald L.
 Galloway, William W.
 Hendren, Mike C.
 Henry, J. Arnold
 Hill, Donald F.
 Honghiran, Ted
 King, John W.
 King, W. Ernest Jr.
 Kolb, James M. Jr.
 Lahr, Charles H.
 Lane, Walter H. Jr.
 Lawrence, Frank M.
 Lovell, Richard K. Sr.
 Lowrey, Douglas H.
 Lyford, Joe H. Jr.
 Malone, George E.
 Mauch, E. Jane
 May, Robert H. Jr.
 Meyer, Kelly H.
 Mobley, Max J.
 Monfee, Andrew M.
 Myers, Gary Dean
 Myers, J. Mark
 New, Kenneth O.
 Patterson, William D.
 Riddell, C. Michael
 Riley, Don C.
 Stolz, Gerald A. Jr.
 Teeter, Stanley D.
 Thurlby, W. Robert
 Turner, Finley P. II
 Wilkins, Charles F. Jr.
 Williams, David M.
 Young, Sandra S.

PULASKI

Abbott, William W.
 Abel, Lee C.
 Abraham, James H.
 Abraham, Robert E.
 Adametz, John H.
 Adamson, James S.
 Alford, T. Dale
 Allen, D. B. Jr.
 Allen, E. Stewert
 Allen, John E. Jr.
 Allen, Thomas H.
 Alston, Phillip R.
 Amir, Jacob
 Anderson, J. Roland
 Angeles, Jana S.
 Araoz, Carlos A.
 Armstrong, Howard M.
 Arrington, Robert W.
 Ashcraft, Keith E.
 Ault, Charles C.
 Austin, R. Lee
 Autry, Daniel H.
 Baber, John C. Jr.
 Baber, John T.
 Baber, William
 Backus, Joe T.
 Bailey, H. A. Ted Jr.
 Baker, Glen F.
 Baker, Johnson J.
 Baker, Susan W.
 Baldwin, Deane G.
 Baldwin, Maxwell R.
 Ballard, Clarence E. Jr.
 Barber, Jeffery Liston
 Barclay, David L.
 Bard, David S.
 Barger, Denver L.
 Barlow, Brian E.
 Barnes, Robert W.
 Barnett, David C.
 Barnett, Troy F.
 Barron, Edwin N. Jr.
 Batres, Francisco
 Bauer, F. Michael
 Bauer, Frank M. Jr.
 Bauman, David C.
 Bearden, James R.
 Beaton, J. Neal
 Beck, Joseph M.
 Becquet, Norbert J.
 Belknap, Melvin L.
 Bennett, Eaton W.
 Bennett, F. Anthony Jr.
 Berry, Frederick B.
 Berry, Robert L.
 Bevans, David W. Jr.
 Biondo, Raymond V.
 Birkett, Ian McRae
 Bishop, William B.
 Black, H. Thurston
 Black, Hal R. Jr.
 Blackshear, Jack L. Jr.
 Blankenship, William F.
 Boellner, Samuel W.
 Boger, James E.
 Boop, Warren C. Jr.
 Bornhofen, John H.
 Bost, Roger B.
 Bowen, William
 Box, Jim F.

Boyd, Charles M.
 Boyle, Ronald H.
 Bozeman, Barbara J.
 Bradburn, Curry B. Jr.
 Bradley, Joe F.
 Brainard, Jay O.
 Brenner, George H. Jr.
 Bressinck, Renie E.
 Brewer, Robert M.
 Brimberry, Ronald K.
 Brinkley, Roy A.
 Brizzolara, A. J.
 Brizzolara, John Paul
 Broach, R. Fred
 Brown, Michael F.
 Brown, Pamela
 Brown, Scott H.
 Browning, Donald G.
 Browning, Stanley K.
 Brunson, Ashley
 Bryant, Deborah M.
 Buchanan, Francis R.
 Buchanan, Gilbert A.
 Buchman, Joseph A.
 Buchman, Joseph K.
 Bucolo, Anthony P.
 Budhraj, Madhu S.
 Buford, Joe L.
 Bumpas, Joe H.
 Burger, Robert A.
 Burnett, Hugh F.
 Burnham, William W.
 Burrow, Dennis R.
 Byrd, Lucas M. Jr.
 Calcote, Robert A.
 Calhoon, J. Dale
 Calhoun, Joseph D.
 Calhoun, Richard A.
 Campbell, Gilbert S.
 Campbell, James W.
 Caplinger, Kelsy J. III
 Carfagno, Jeffrey J.
 Camahan, Robert G.
 Carson, Layne E.
 Carter, Jerry L.
 Caruthers, Samuel B. Jr.
 Casali, Robert E.
 Casper, Robert B.
 Cathey, Janet
 Cathey, Steven
 Chakales, Harold H.
 Chandler, Billy M.
 Chang, Chimin J.
 Chappell, Carol W.
 Cheairs, David B.
 Cheairs, John T.
 Chesser, Michael Z.
 Chisholm, Dan P.
 Choate, Robert B.
 Christeson, William W.
 Christian, John D.
 Chudy, Amail
 Church, Beresford L.
 Church, Marion M.
 Clark, Richard B.
 Clift, Steven A.
 Clifton, Cliff
 Cobb, Jock S.
 Cockrill, H. Howard Jr.
 Cogburn, Bob E.
 Colclasure, Joe B.

Cone, John
 Cook, Raymond C.
 Cornell, Paul J.
 Cornett, James K.
 Cosgrove, Kingsley W. Jr.
 Craig, Marion S. Jr.
 Crews, J. Travis
 Crocker, Charles H.
 Cross, J. B.
 Crow, Joe W.
 Crow, R. Lewis Jr.
 Curtner, Bryon D.
 Dalrymple, Glenn V.
 Daugherty, Joe D.
 Daugherty, John L.
 Davie, Melanie
 Davis, J. Lynn
 Dean, David M.
 Dean, Gilbert O.
 Deer, Philip J. Jr.
 Deer, Philip James III.
 Dennis, James L.
 Denson, William D.
 DesLauriers, S. Killeen
 Dickins, John R. E.
 Dickins, Robert D. Jr.
 Dickson, D. Bud
 Dillard, Daniel C.
 Diner, Wilma C.
 Dixon, Keith A.
 Dodd, Doyne
 Dodge, Eva F.
 Doucet, Marlon J.
 Douglas, Warren M.
 Downs, Ralph A.
 Duffour, Rory J.
 Dungan, William T.
 Durham, James W.
 Dwyer, Gregory A.
 Easley, Edgar J.
 Easter, Rex M.
 Edge, Otis H.
 Edmiston, Frank G.
 Eisenach, Robert J.
 Elders, M. Joycelyn
 English, Jim
 Eyre, Byron L.
 Farmer, Joseph F.
 Farque, Greg L.
 Farris, Guy R. Jr.
 Fernandez, Agustín
 Ferris, Ernest J.
 Fewell, Ronald D.
 Fielder, Charles R.
 Fields, Patrick R.
 Finan, Barre F.
 Fincher, Robert L.
 Finkbeiner, Alex E.
 Fiser, P. Martin
 Fiser, Robert H. Jr.
 Fiser, William P. Jr.
 Fitzgerald, Charles P.
 Fitzhugh, A. Stuart
 Flack, James V. Jr.
 Flanigan, Stevenson
 Flanigan, William J.
 Fletcher, Anthony
 Fletcher, Elizabeth D.
 Fletcher, Thomas M.
 Flippin, Tony A.
 Florez, James P.

Floyd, Bill G.	Headstream, James W.	Kaemmerling, Raymond E.	Mason, William L.
Fraiser, Lacy P.	Heamsberger, Henry G. Jr.	Kahn, Alfred Jr.	Matthews, Joseph W.
France, Gene L.	Hedges, Harold H.	Kane, James J.	Matthews, Robert R.
Franklin, Gregory	Hefley, Bill F.	Keathley, Susan A.	Mattison, Donald R.
Fraser, Eric A.	Henker, Fred O. III	Keeran, Michael G.	McAdoo, Hosea W. Jr.
Fraser, James H. Jr.	Henry, C. Reid Jr.	Kellar, Stanley L.	McCarthy, Richard E.
Frazier, Cynthia	Henry, Charles R. Sr.	Keller, Alford W.	McCluer, Shirley M.
Frazier, George T.	Henry, D. Andrew	Kennedy, Charles H.	McConnell, John D.
Fuller, C. Dale	Henry, G. Morrison	Kennedy, Eleanor E.	McCracken, Gail Ann
Fulmer, John M.	Henry, Guy	Kennedy, H. Frazier	McCracken, John D.
Galbraith, Robert C.	Henry, J. Charles	Key, J. Michael	McCrary, George A.
Gardner, Guy F.	Henry, J. Forrest Jr.	Kilgore, Reed W.	McCutcheon, Frank B. Jr.
Gaston, Robert S.	Henry, Richard Y.	King, Michael T.	McDonald, James Ewell
Gay, Ellery C. Jr.	Henry, Robert A.	Kirchner, Jeffrey	McDonald, Judy
Gettys, Joseph M. Jr.	Henry, Robert L. Jr.	Kitler, Fred J.	McDonald, William Glen
Gibbs, Mark	Henry, William T.	Kizziar, Jim C.	McGowan, Robert J. Jr.
Gibson, Gordon L.	Herron, Jerry M.	Knight, Daniel	McGrew, Robert N.
Giglia, Anthony R. III	Herron, John T.	Knowles, Stanley C.	McKelvey, K. David
Giles, Wilbur M.	Hickey, Joseph P.	Knox, Michael F.	McKenzie, Charles N.
Gillespie, A. Tharp	Hicks, David	Kolb, Agnes J.	McKinney, Carl N.
Glenn, Robert Edward	Hicks, David C.	Kolb, W. Payton	McKnight, C. Allen
Glenn, Wayne B.	Hill, Allen	Koonce, Thomas W.	McMillin, F. Lamar Sr.
Glidden, Michael L.	Hodges, J. Timothy	Kovaleski, Thomas M.	McNair, James R.
Glover, Lawson E. Jr.	Hodges, Lindy L.	Kozberg, Oscar	McNee, Valerie
Glover, W. Clyde	Hodges, Steven C.	Krulin, Gregory S.	Meacham, Donald F.
Golden, William E.	Hoffmann, Thomas H.	Kumpuris, Andrew G.	Meador, Annette Parker
Good, Henry H.	Holland, Jay D.	Kumpuris, Frank G.	Means, Paul N.
Gordon, Vida H.	Hollenberg, Henry G.	Kwee, James J.	Mendelsohn, Lawrence A.
Gosser, Bob L.	Holloway, J. Douglas	Kyle, Joan E.	Middaugh, Riley Ann
Goza, George M. Jr.	Holmes, Harlan C.	Kyser, James F.	Miles, David A.
Graham, G. Grimsley	Holt, Everett L.	Laakman, Robert W.	Miller, Forrest B. Jr.
Grant, Karen G.	Holt, L. Gordon	Lambert, Robert A.	Miller, Frank C.
Gray, Edwin F.	Holt, Stephen D.	Landers, James H.	Miller, Raymond P. Sr.
Green, Benny J.	Holton, Jerry C.	Landgren, Robert C.	Milner, E. L.
Green, William O. III	Hough, Aubrey J. Jr.	Lane, John W.	Mitchell, George K.
Greenway, C. Don	Houk, Richard	Lang, Nicholas P.	Mizell, Walter S.
Greer, Gerald S.	Howell, Coburn S. Jr.	Langston, Harold D.	Money, Wandal D.
Greutter, John E. Jr.	Howell, Marsha T.	Laurenzana, Donald A.	Mooney, Donald K.
Grimes, H. Austin	Hudson, Thomas F. III	Lawson, Mason G.	Moore, Burton A.
Growdon, James H.	Hughes, Ronald D.	LeNarz, LeRoy A.	Moore, J. Malcolm Jr.
Guggenheim, Frederick G.	Hundley, John M.	Lea, Allen K.	Moore, Michael
Guin, Jere D.	Hundley, Randal F.	Lehmberg, Robert W.	Moore, Rex N.
Hagler, James L.	Hutchins, Steven W.	Leibovich, Marvin	Moore, Robert B.
Hahn, Herbert	Hutson, Harold G.	Leonard, Donald G.	Morris, Paula
Hall, A. D.	Jackson, J. Presley	Lepore, Diane G.	Morris, W. Dale
Hall, A. David	Jackson, Morris A.	Levin, Frederick R.	Morris, Woodbridge E.
Hall, R. Whit	Jansen, G. Thomas	Lewis, Derek	Morrison, Debra F.
Hampton, John R. III	Jay, Walter M.	Lewis, W. Sexton	Morrison, James R.
Hankins, Edwin III	Jefferson, Thomas T.	Lile, Henry A.	Morse, James C.
Hardberger, R. E.	Jelovsek, Frederick R.	Lincoln, Ben M.	Morton, William J.
Hardin, Ronald D.	Johnson, B. Richard	Lipke, Jay M.	Mulhollan, James S.
Harger, C. Harold	Johnson, Ben D.	Livingston, Richard Lee	Mundie, J. Ryland
Hargrove, Joe L.	Johnson, Dianne Flowers	Loebl, Edward C.	Murphy, Bruce
Harper, Ernest H.	Johnson, Henry D.	Logan, Charles W.	Murphy, James E. Jr.
Harper, Gary E.	Johnson, Philip H.	Love, Tommy L. Jr.	Murphy, Randolph
Harrendorf, Cagle	Johnston, Dale E.	Lowe, Betty A.	Murphy, Robert
Harris, Donald R.	Johnston, Thomas G.	Lucas, Kathryn Jean	Nagel, Fred G.
Harris, Frances R.	Jones, Gail Reede	Lucy, Dennis D. Jr.	Nash, John C.
Harris, Ruben Michael	Jones, Garry L.	Ludwig, Frank R.	Nelson, Alvah J. III
Harris, T. Stuart	Jones, John C.	Lyons, Virgle E. Jr.	Nelson, Carl L. Jr.
Harris, William T.	Jones, Kathleen C.	Magie, Stephen K.	Nestrud, Richard M.
Harrison, A. Vale	Jones, Robert D.	Malak, F. A.	Newbern, David H.
Harrison, Roy E.	Jones, Roy	Mallory, John A.	Newsom, Jon Kirby
Harrison, William E.	Jones, William N.	Malloy, Mark	Nisbett, James M. #
Harshfield, David Lee Jr.	Jordan, F. Richard	Maloney, F. Patrick	Nix, Richard A.
Hawley, Harold B.	Jordan, Randy A.	Mann, R. Jerry	Nokes, Steven
Hayden, William F.	Joseph, Ralph F.	Marecek, Raymond L.	Nolen, James E.
Hayes, J. Harry Jr.	Joseph, William Frank	Markland, Gary S.	Norton, George A.
Hayes, Richard L.	Jouett, W. Ray	Marks, Stephen R.	Norton, Joseph A.
Hayes, Sidney P.	Joyce, John W.	Martin, Richard H.	O'Brien, Mary E.
Haynes, W. Ducote	Junkin, Ruth H.	Mason, J. Zachary	O'Neal, Walter H.

- Oates, Gordon P.
Oddson, Terrence A.
Ogden, Mahlon D.
Oglesby, Walter R.
Osam, Patrick N.
Osteen, Paul K.
Ozment, Kerry L.
Padberg, Frank T.
Padilla, Fernando
Pappas, James J.
Parker, J. Mayne
Parker, Pamela E.
Parnley, Tim
Parnell, Clifton L. III
Paulus, Thomas E.
Pearce, Charles
Peeples, R. Earl
Peters, John E.
Peters, Phillip J.
Petursson, Gissur J.
Phillips, Bert L.
Phillips, Charles E.
Phillips, James R.
Pike, John D.
Pledger, Norman R.
Pollard, Arlee E.
Pope, Norton A.
Porter, Robert A. Jr.
Potts, Jerry L.
Power, Robert C.
Prather, Jerry L.
Price, Ben O.
Pringos, Andrew A.
Purdy, Harold D.
Pyle, Hoyte R. Jr.
Quirk, J. Gerald
Ragsdill, Mary L.
Ransom, John M.
Raque, Carl J.
Rasch, James R.
Read, Raymond C.
Rector, Nancy F.
Reding, David L.
Redman, John F.
Reed, Ewing C. Jr.
Reese, William G.
Regnier, George G.
Reid, Gene W.
Rice, Charles
Riddle, John F. Jr.
Riegler, N. W. Jr.
Riley, William H.
Ritchie, Robert Ross
Roberson, Michael C.
Robinson, Paul F.
Rodgers, C. Dudley Jr.
Rodgers, Charles H.
Rooney, Thomas P.
Rosenbaum, Carl A.
Ross, Ashley Sloan Jr.
Ross, Robert W.
Ross, S. William
Rothert, Frances C.
Rounsaville, Harry L.
Roy, F. Hampton
Ruggles, Dwayne L.
Runyan, William A.
Rutledge, William L.
Saer, Edward H. III
Sain, Mary K.
Saltzman, Ben N.
Satre, Richard W.
Satterfield, John V. III
Schock, Charles C.
Schratz, Bruce E.
Schroeder, George T.
Schultz, John C.
Schwander, L. Howard
Scruggs, Jan W.
Seale, Karen S.
Searcy, Robert M.
Seibert, Joanna J.
Selakovich, Walter G.
Selby, John H. Jr.
Shannon, Robert F.
Shock, John P.
Short, Harold K.
Sidebottom, Teresa
Silvoso, Gerald R.
Simmons, Orman W.
Simpson, N. Henry Jr.
Sims, James M.
Singleton, L. Gene
Sipes, Frank M.
Skokos, C. Kemp
Slater, John G. Jr.
Slaven, John E.
Slayden, John E.
Sloan, Fay M.
Sloan, James M.
Smart, Douglas F.
Smith, Aubrey C.
Smith, David E.
Smith, Douglas B.
Smith, G. Richard Jr.
Smith, James L.
Smith, Mose III
Smith, Purcell Jr.
Smith, Thomas J.
Smith, Thomas W.
Smith, Tom
Somers, A. Jack
Sorrells, R. Barry
Sotomora, Ricardo F.
Spitzberg, Irving J.
Squire, Arthur E. Jr.
St. Amour, Thomas E.
Stair, J. Michael
Stanford, Royce Allan
Stanley, Joe P.
Steele, William L.
Stefans, Vikki Ann
Sternberg, Jack J.
Stone, Phillip S.
Storeygard, Alan R.
Stotts, John R.
Strauss, Alvin W. Jr.
Strauss, Mark A.
Strode, Steven W.
Stroope, George F.
Stuckey, James G. Jr.
Studdard, James D.
Sturdivant, Stephen
Suliman, J. Samir
Sullivan, Charles D.
Sullivan, Jan R.
Sundermann, Richard H.
Swindoll, Bryant S.
Tamas, David E.
Tanner, James A.
Taylor, David R.
Taylor, Eugene H.
Tedford, John G.
Teeter, John A. #
Texter, E. Clinton Jr.
Thomas, A. Henry
Thomas, Jerry L.
Thomas, Kathy
Thomas, Peter O.
Thompson, A. James
Thompson, A. Reed
Thompson, Dola S.
Thompson, John R.
Thompson, S. Berry Jr.
Thorn, G. Max
Tilley, Steve
Tirman, Robert M. #
Towbin, Eugene J.
Tracy, Phillip A.
Tranum, Bill L.
Trussell, Thomas W.
Tseng, Jyi-Ming
Tucker, R. Stephen
Tucker, W. Everett
Valentine, Robert G. Jr.
Vaughter, W. Roger
Velez, Louis D.
Vogel, Robert G.
Wade, William I. Jr.
Wagoner, Jack
Walt, James R.
Ward, Harry P.
Ward, Joseph P.
Warford, Lloyd R.
Warford, Walton R.
Watkins, Charles J.
Watkins, John G. Jr.
Watkins, John G. III
Watkins, Larry S.
Watson, C. Robert
Weber, Edward R.
Weber, James R.
Weber, Michael J.
Weiss, Gerald N.
Welch, Samuel Bradley
Wellons, James A. Jr.
Wende, Raymond A.
Wenger, Carl E.
Westbrook, Kent C.
Westerfield, Frank M. Jr.
Westerman, G. Richard
White, Faber A.
White, Oba B.
White, Ronald Lynn
Wilkes, Elbert II.
Wilkes, T. David I.
Williams, Alonzo D.
Williams, C. David
Williams, G. Doynce Jr.
Williams, Ronald N.
Wilson, Elaine
Wilson, Frances C.
Wilson, Frank J. Jr.
Wilson, Ivan D.
Wilson, James W.
Wilson, Jed D.
Wilson, John L.
Wilson, R. Sloan
Wingfield, Dennis L.
Winn, Charles R. Jr.
Wolverton, John
Wong, Ting C.
Workman, W. Wayne
Wortham, Thomas H.
Wright, Ruel N.
Young, Douglas E.
Zelnick, Paul W.
- ## RANDOLPH
- Baltz, Albert L.
Barre, Hal S.
Cannon, Donald C.
DeClerk, Thomas B.
Holt, Danny B.
Jansen, Andrew J. III
Murrey, James F.
Scott, William W.
Smith, Norman K.
Smoot, John D.
- ## SALINE
- Ashby, John W.
Ashby, Robert M.
Baber, Quin M.
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Sudderth, Brian F.
Taggart, Sam D.
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Brown, James A.
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Landrum, Samuel E.
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Crabtree, Herbert M.
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 Hankins, Jill T.
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 Herndon, Greta P.
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 Mason, Charles F.
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 Medlock, Rickey D.
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 Metrailer, James A.
 Miers, Jane F.
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 Morrison, Lynn
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 Murphy, Joseph S.
 Murphy, Robert A.
 Naisbitt, Mark S.
 Ngo, Lam
 Olsen, Mark F.
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 Palesano, Richard
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 Sankey, Felicia D.
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 Schexnayder, Stephen M.
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 Shaheen, Saad P.
 Sharp, Jim D.
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 Warmack, Asa M.
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 Webb, Timothy
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STUDENTS

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 Akins, Victoria
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 Allard, Mark M.
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 Beard, Michael R.
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 Coleman, Ryan
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 Connelley, Jon
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 Cooper, Jesse E.

Cooper, Roy E. Jr.
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 Eads, Cheryl
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 Hlavaty, Todd E.
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 Hughes, Karen L.
 Hughes, R. Hal
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 Kelly, Ken F.
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 Woods, Jerrye A.
 Wren, Mary R.
 Wright, C. Kent
 Yearwood, Kirtley
 Yee, Suzanne
 Young, Karen L.
 Young, Michael W.
 Ziegler, Robert H.
 de Saint-Felix, Douglas

Translumbal Inferior Vena Cava Groshong Catheter Placement in a Patient with Superior Vena Cava Occlusion

Michael F. Knox, M.D., Jerry C. Holton, M.D., W. Dale Morris, M.D., and Tony A. Flippin, M.D.

Introduction

Long-term central venous access is required in many patients for administration of chemotherapy or total parenteral nutrition (TPN). The majority of these are placed by the subclavian vein although other routes have been used, including the jugular vein, the saphenous vein, and the inferior epigastric vein (the latter two primarily in children). Right thoracotomy with surgical placement into the right atrium, azygos vein,¹ and superior vena cava has also been used.

Over the years the types of catheter material have improved, and we are currently using silicone Groshong catheters (Catheter Technology Corporation, Salt Lake City, Utah). Some patients with tumor of the mediastinum or long-term subclavian catheters can develop superior vena cava (SVC) occlusion or subclavian vein occlusion; in either situation, other routes of access are needed. This report describes a technique for placement of a Groshong catheter by a percutaneous translumbal inferior vena cava (IVC) puncture.

Case Report

A 50-year-old female with a germ cell neoplasm originating in her mediastinum had undergone multiple courses of chemotherapy with several different subclavian catheters over a period of ten months. She had developed SVC occlusion, probably as a result of tumor compression of veins as well as extended indwelling central venous catheters being present. Bilateral arm venograms showed occlusion of both subclavian veins and SVC with collaterals to the IVC via the hemiazygos vein (Figure 1). At one point in her care, urokinase infusion with attempts to lyse SVC thrombus was instituted; however, that was not successful. Long-term central venous access was deemed necessary for chemotherapy and was planned via the IVC.

Preoperative evaluation included CBC with platelet count, PT, and PTT. All were within normal limits. Inferior vena cavagram was performed to evaluate the anatomy of the IVC and exclude congenital variations. This showed extrinsic displacement of the IVC and a provable intraluminal mass protruding into the cava (Figure 2). CT scan was then done showing multiple enlarged neoplastic lymph nodes in the retroperitoneal area around the vena cava. The pigtail catheter was left in place in the IVC as a target for percutaneous puncture of the IVC.

The patient was then taken to the operating room. Local anesthesia and intravenous sedation were administered. Using C-arm fluoroscopy, an 18-gauge Teflon sheath was inserted by a percutaneous puncture approximately 10cm to the right of the spinous process of L4 and angled medially in the cephalad direction until the IVC was punctured at the L3 level. Once the sheath was in the IVC, a guide wire was placed and manipulated beyond the protruding tumor allowing exchange for a 10-

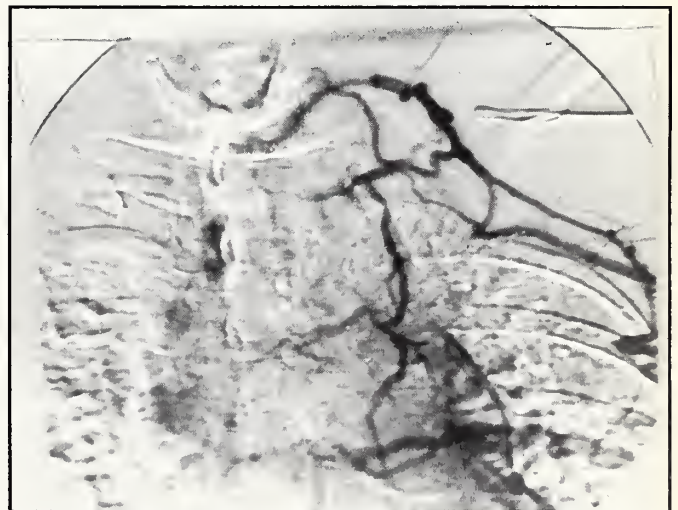


Figure 1. Left arm venogram with digital subtraction imaging shows occlusion of subclavian vein and SVC.

St. Vincent Infirmary Cancer Center, Two St. Vincent Circle, Little Rock, Arkansas 72205.

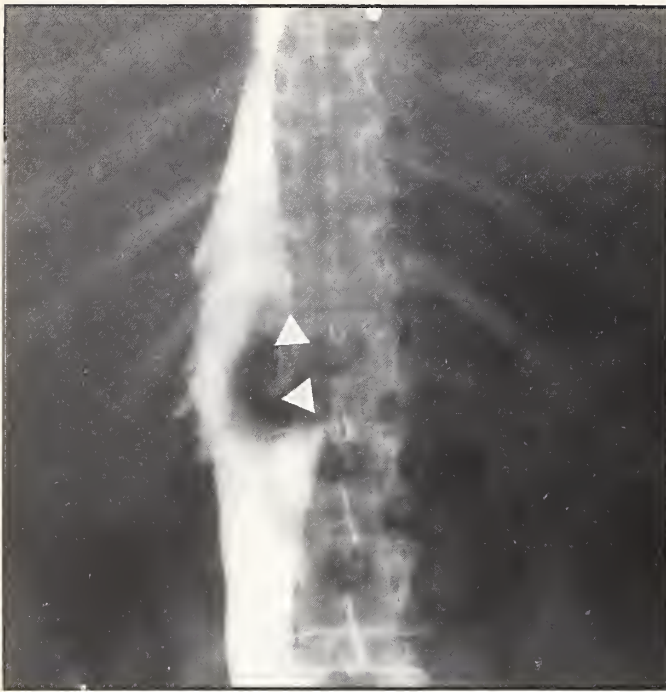


Figure 2 (l) and Figure 3 (r). AP and lateral projections of an inferior vena cavagram. Anterior displacement of IVC (arrows) and questionable intraluminal tumor thrombus versus eccentric mass (arrowheads).

French, 20-cm-long peel-away sheath. The inner dilator of the sheath and the guide wire were then removed, and an 8-French, single-lumen Groshong catheter was placed with its tip in the right atrium. The sheath was peeled away, and the other end of the Groshong catheter was tunneled subcutaneously around the flank to an exit point on the anterior axillary line. The position of the Groshong catheter was then tested by contrast injection, and bandage applied. One day postprocedure, a CT scan of the retroperitoneum was done to assure that no retroperitoneal hematoma was present.

Discussion

Kenney et al² reported percutaneous Hickman catheter placement into the IVC with this method in a patient with nearly complete occlusion of the SVC, brachiocephalic veins bilaterally and right subclavian vein who required TPN. Denny et al³ also used this technique in two patients with SVC obstruction who required TPN. In these latter two patients, the catheter remained patent 10 and 12 months postprocedure without evidence for caval thrombosis.

This route offers a direct, nonoperative approach to the largest vein in the body. The risk of caval thrombosis is low due to the high flow within the IVC. For this reason, it has an advantage over cannulation of the saphenous vein, femoral vein, or inferior epigastric vein. Because of its percutaneous placement with only local anesthesia and intravenous sedation, it is preferable to more invasive operative placements which might require general anesthesia. The inferior vena cavagram prior to placement of the catheter is thought to be essential, excluding anatomic variance of the IVC or, as in our case, delineating involvement of the IVC by tumor. Using this

approach, we do not feel that preoperative CT scan is routinely required because the catheter will be placed through the paraspinous musculature and will not enter the peritoneal space.

In our patient, the original catheter placement was successful; however, after several days, the catheter was inadvertently pulled out by the patient requiring replacement in the same manner. In the second placement, the Dacron cuff of the catheter was sutured subcutaneously at the site of percutaneous puncture, and the catheter was sutured at the exit site from the skin. The patient has currently done well without evidence of catheter migration or IVC thrombosis.

This method of translumbar IVC placement of an indwelling central venous catheter is a logical extension of percutaneous procedures done every day by interventional radiologists and can be effective in patients who have SVC or subclavian vein occlusion. The expertise of a surgeon in anchoring the catheter and in subcutaneous tunneling of the catheter is necessary for optimal placement.

Acknowledgement

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Normal and Abnormal Puberty

Eva M. Komoroski, M.D.*

Introduction

Puberty is a period of profound physical, physiologic, and emotional change during which secondary sexual characteristics appear and mature, and fertility is achieved.

The age of onset of puberty has decreased dramatically over the past 150 years, at the rate of 2-3 months per decade. It is thought that improvements in health care, socioeconomic conditions and nutrition have contributed to this trend.

The age of onset of puberty can be affected by many variables. The age at which a child's parent started puberty can be an important predictive variable of when the child will begin to show changes of puberty. In particular, the age at which a girl's mother achieved menarche correlates well with the girl's onset of menses. Menarche is delayed in rural as opposed to urban dwelling females, perhaps due to an increase in physical activity. Blind and otherwise handicapped girls also menstruate relatively early. Again, it is thought that decreased physical activity plays a part in this phenomenon. Earlier sexual maturation occurs at lower rather than higher elevations above sea level and also east of the Rocky Mountains.

The size and age of a child are generally poor predictors of age at menarche. It is known, however, that moderate obesity (up to 30% above normal weight for age) can lead to earlier menarche, and severe obesity is often associated with delayed onset of puberty, especially when associated with syndromes such as Laurence-Moon-Biedl and Prader-Willi. Adolescents below ideal body weight and those who are excessively active physically (ballet dancers, as an example) experience delays in pubertal development.

There are some racial differences in pubertal development. On average black girls develop secondary sex characteristics and achieve menarche earlier in life than caucasian girls, even when variables such as socioeconomic status, geographic region and early menarche are considered. There is no racial difference in the onset and progress of secondary sexual characteristic development in male children.

A study of former premature infant girls showed that their age at menarche was no different than in former full-term

infants, but the average height and weight of these girls was below the average for their age group.

Statistics and sequence of events in pubertal development

In 98.8% of all males, puberty begins between 9-14 years (mean 11.6 years) and is completed in 3.5 years (range 2-4.5 years). The sequence of male pubertal development begins with testicular enlargement followed within 6 months by development of pubic hair. About one year later, phallic enlargement occurs, and six months thereafter, axillary and facial hair appears. The growth spurt is a late event in male puberty, starting at the time of mid-puberty when the phallus enlarges, and reaches a maximum velocity when the genitalia and pubic hair are at adult stages. It is around this time that voice deepening occurs, as a result of androgen-induced enlargement of the larynx.

In females, puberty begins between 8-13 years of age and is completed in a mean of 4.2 years with a range of 1.5 - 6 years. Breast bud development is the initial event. Breasts do not develop simultaneously or symmetrically, and the right breast is typically larger than the left at all ages. Unilateral breast bud development is very common and may persist for six months before the other breast bud appears. Coincident with breast bud development is the female adolescent growth spurt, an early pubertal event in females. The female growth spurt peaks at approximately 12 years of age on the average. Pubic hair begins to develop at about six months after the initial events. However in 16% of normal girls, pubic hair develops before breasts do. As the peak height velocity occurs, external genitalia mature. Menses begins and axillary hair appears within two years of initiation of puberty, just as a girl's height velocity slows down.

The Tanner stages were developed by two English physicians, Marshall and Tanner, and were initially published in the 1960's. These physicians observed and photographed 192 caucasian girls and 228 caucasian boys at 3 month intervals during the adolescents' residence in a group home for abandoned children. After 19 years of observation, the sequence of normal pubertal events was documented, and the Tanner stages were developed (Figure 1).

* Arkansas Children's Hospital, 800 Marshall Street, Little Rock, Arkansas 72202.

Figure 1. Tanner Stages.

Female		Male	
Breast		Genitalia	
Stage I	Breasts preadolescent	Stage I	Penis, testes, and scrotum are of childhood size
Stage II	Breast buds appear, areolar diameter increases	Stage II	Enlargement of scrotum, testes, but not the penis; scrotal skin reddens
Stage III	Further enlargement of breasts and areola with no separation of their contour	Stage III	Further growth of testes, penis lengthens
Stage IV	Areola and papilla form a secondary mound above the breast	Stage IV	Further growth testes and scrotum; penis widens
Stage V	Mature female; areola has recessed into general contour of the breast	Stage V	Adult genitalia
Pubic Hair		Pubic hair	
Stage I	No pubic hair	Stage I	No pubic hair
Stage II	Sparse growth of hair along labia	Stage II	Sparse growth of hair at base of penis
Stage III	Darker, coarser, more curled hair, sparse over pubic symphysis	Stage III	Darker, coarser, more curled hair, sparse along pubic symphysis
Stage IV	Hair adult in type, covers a smaller area than in the adult, doesn't extend to thighs	Stage IV	Hair adult in type, covers a smaller area than in adult, doesn't extend to thighs
Stage V	Hair adult in quantity and type, extends to thighs	Stage V	Hair is adult in quantity and type, extends to thighs

Benign variants of sexual development

Premature thelarche is defined as unilateral or bilateral breast enlargement in girls before the age of 8, usually at 1-4 years. It is not associated with the presence of pubic hair, vaginal bleeding or a growth spurt. There may be estrogenization of the vaginal mucosa on occasion. It differs from neonatal breast development which usually lasts only six months. Girls with premature thelarche go through puberty at a normal rate and at an appropriate age.

The natural history of premature thelarche was followed in 46 cases reported in *Amer. J. Dis. Child.*, Vol. 135, August 1981. Eleven percent of girls had progressive breast enlargement, 32% had disappearance and 57% had persistence throughout the seven years of the study.

This condition is thought to be caused by increased sensitivity of the prepubertal breast to normal prepubertal amounts of estrogen or due to estrogen secreting follicular cysts or perhaps a transient increase in plasma estrogen concentration.

As was implied, the condition is benign, but careful examination for other signs of precocious puberty is warranted.

Premature adrenarche is the isolated growth of pubic and/or axillary hair and presence of adult axillary odor in girls less than 8 years of age and boys less than 9 years of age without other signs of virilization. It is a benign condition caused by precocious increase in androgen production by the adrenal gland. It is usually slowly progressive or non-progressive in nature. Bone age and height age are slightly advanced for chronologic age. This condition occurs predominantly in females. Early growth of pubic hair can also be a symptom of an androgen-secreting tumor of the adrenal or gonads or of a variant form of congenital adrenal hyperplasia. Adrenal androgen levels (DHEA, androstenedione) are elevated to pubertal

levels in this condition, but serum testosterone is not. (This can be a useful discriminator since testosterone-secreting ovarian, testicular or adrenal tumors can also be responsible for pubic hair development).

Premature menarche has been reported in females one through nine years of age without any other signs of secondary sexual development. Menses can last 1-6 years, and secondary sexual development and regular menses then begin and follow a normal pattern. The girls affected attain normal fertility and height. All other signs of early estrogen secretion (neoplasm, granuloma, cervicitis, vaginitis, or foreign body) must be ruled out before this unusual diagnosis is made.

Adolescent gynecomastia is a common normal variant of puberty. Boys going through puberty may have unilateral or bilateral breast enlargement of varying degrees, usually beginning in early to mild puberty. Their hormone levels of testosterone and estradiol are within the normal range. If estradiol is elevated, a feminizing tumor should be considered. The condition usually spontaneously resolves within two years, but may be significant enough to require reduction mammoplasty.

It is important to remember that several drugs can cause gynecomastia at any age including cimetidine, spironolactone, digitalis, phenothiazines and marijuana.

Precocious puberty

Precocious puberty is the appearance of secondary sexual maturation at less than 8 years in girls and less than 9 years in boys. Precocious puberty occurs in 0.6% of the population.

There are two types of precocious puberty. The first, complete isosexual precocity, or true or central precocious puberty, results from premature activation of the hypothalamopituitary axis. The second is incomplete isosexual precocity or

pituitary-gonadotropin-independent sexual precocity if there is extra-pituitary secretion of gonadotropins or secretion of sex steroids independent of pituitary-gonadotropin stimulation.

In all cases of sexual precocity, because of increased sex steroid secretion, bone age matures, height velocity increases, and somatic and skeletal changes approaching adulthood occur. Children with precocious puberty are taller than their peers as children, but because of premature epiphyseal closure, are relatively short adults. There is no maturation of thought processes or emotions, but there is significant emotional lability in these children, which is one of the most difficult symptoms to handle. Children with precocious puberty can achieve fertility, and child-bearing has been reported. However, girls with precocious puberty do not achieve menopause sooner than other women.

Neuroendocrinologically, there is no difference between normal adolescent puberty and precocious puberty. Sex steroid concentrations are equivalent, as are luteinizing hormone and follicle stimulating hormone levels from the pituitary gland.

In idiopathic true precocious puberty, there are no signs of organic disease, and no familial tendency for early maturation. It can occur in infancy and is more common in girls than boys. Pubertal development follows the usual sequence, and may progress rapidly or may wax and wane. True precocious puberty can be transmitted as an autosomal recessive or dominant trait. Eighty-five percent of precocious puberty in girls falls under the category of idiopathic true precocious puberty.

Other causes of true or central precocious puberty are central nervous system abnormalities, such as optic or hypothalamic gliomas secondary to neurofibromatosis, astrocytomas, ependymomas, craniopharyngiomas, hydrocephalus, encephalitis, head trauma, brain abscesses, arachnoid cysts, sarcoid or tuberculous granulomas, or hypothalamic hamartomas. Hypothalamo-pituitary activation can occur in each of these conditions, setting off the endocrinologic changes which cause puberty. CNS tumors must be ruled out in any child with sexual precocity, especially in boys, in whom 33% of true precocious puberty is due to a tumor.

True precocious puberty has been treated in the past with depo-provera (medroxyprogesterone) with variable success. Recently gonadotropin releasing hormone has been used experimentally with very good results. The substance decreased gonadotropin secretion and, as a result, ended organ stimulation. When it is stopped, gonadotropin secretion went back to pubertal levels.

Incomplete forms of isosexual precocity result from secretion of testosterone in boys and estrogen in girls, independent of hypothalamic stimulation. LH and FSH are not elevated. There are several causes of incomplete isosexual precocity in males:

1. HCG-secreting tumors such as hepatomas, hepatoblastomas, teratomas or chorioepitheliomas. The latter two can be present in the mediastinum or hypothalamus.
2. Congenital adrenal hyperplasia is a result of 21-hydroxylase or 11-B hydroxylase deficiency and can lead to

increased androgen production and masculinization. Suppression with glucocorticoids decreases androgen secretion and arrests virilization.

3. Virilizing adrenal carcinomas or adenomas.
4. Leydig cell hyperplasia or familial testotoxicosis, an autosomal dominant transmitted premature Leydig cell and germ cell maturation, characterized by enlargement of testes to mid-pubertal size and hyperplasia of Leydig cell histologically.

Causes of incomplete isosexual precocity in females include:

1. HCG secreting tumors such as teratomas/teratocarcinomas.
2. Estrogen secreting ovarian masses, such as large follicular cysts, and ovarian tumors such as granulosa cell tumors or theca cell tumors, or rarely ovarian carcinomas.

Exogenous sources of sex steroids can cause signs and symptoms of precocious puberty. Prepubertal children are very sensitive to exogenous sex steroids. Secondary sex characteristics can result from ingestion, inhalation, or cutaneous contact with cosmetics, livestock feeds, foods, or drugs such as oral contraceptives.

Delayed puberty

Delayed puberty is a lack of physical signs of sexual maturation in females older than 13 and males older than 14 years of age. The differential diagnosis includes three major items: constitutional delay, hypergonadotropic hypogonadism, and hypogonadotropic hypogonadism.

Constitutional delay is the physiologic variant of the normal velocity of puberty. Patients give a history of parents or siblings showing lack of secondary sexual characteristics until 14-17 years of age. Both pubertal development and bone age are delayed. Bone age is, in fact, a good marker of pubertal progression in these patients. Giving a few testosterone injections can enhance secondary sex characteristic maturation in boys once puberty has begun, but administration of estrogen to girls can lead to premature epiphyseal closure.

Hypergonadotropic hypogonadism is the result of gonadal failure to decreased sex steroid production, causing increased FSH and LH levels of pituitary. It is associated with chromosomal abnormalities such as Klinefelter's syndrome (XXY) or XYY, XXY, XXXY karyotypes. Other causes of gonadal failure in males include exposure of the prepubertal testis to chemotherapy drugs such as cyclophosphamide or chlorambucil, radiation therapy to the testis, anorchia due to fetal accident, undiagnosed cryptorchidism, or Noonan's syndrome. In females, gonadal dysgenesis can occur spontaneously or as an inherited trait and lead to hypergonadotropic hypogonadism as can galactosemia (commonly associated with primary ovarian failure) and Turner's syndrome.

Hypogonadotropic hypogonadism is a deficiency of FSH and LH resulting in lack of sexual maturation. This can be the result of genetic or developmental defects, tumors, vascular lesions, inflammatory processes or trauma.

Craniopharyngioma is the most common tumor associated with hypogonadotropic hypogonadism. It accounts for 9% of intracranial tumors in children. Other tumors which can cause this problem are hypothalamic and optic gliomas of neurofibromatosis, astrocytomas, prolactin-secreting adenomas and germinomas or pinealomas.

CNS disorders other than a discrete tumor can also lead to hypogonadotropic hypogonadism, such as septo-optic dysplasia, post-infection, inflammatory of vascular lesions or post-CNS irradiation damage (which happened when the pituitary and hypothalamus were not shielded during CNS irradiation, as is done today).

Two syndromes which are associated with hypothalamic dysfunction are Prader-Willi, with hypopentia, obesity and hypogonadism, and Laurence-Moon-Biedl syndrome, an autosomal recessive inherited syndrome of polydactyly, obesity, mental retardation and delayed puberty.

Several endocrine conditions can cause functional hypogonadism: hypothyroidism, Cushing's disease, or hyperprolactinemia. Growth hormone deficiency does not cause pubertal delay.

A special category of patients has recently emerged who have problems with hypothalamic hypogonadism - those with anorexia nervosa. These adolescents have marked delays in pubertal development and even regression of Tanner Stages. When FSH and LH levels were measured in these patients, they were very low. It is unclear whether the weight loss these patients experience or the psychological/emotional effects of the disease cause their hypothalamic dysfunction. (Simple weight loss has been shown to cause hypothalamic dysfunction).

Excessive amounts of physical activity have also been shown to delay menarche and pubertal development. This has been studied in ballet dancers who practiced 20-30 hours/week. If they were forced by injury to decrease their exercise activities, pubertal development occurred, and at a rate far more rapid than usual, even without any weight gain. Once a regular schedule of exercise resumed, these young women became

amenorrheic despite no weight change. It appears that weight loss or strenuous physical activity play a role in hypothalamic dysfunction leading to pubertal delays.

Work-up of a child with abnormal puberty should consist of a good history including familial pattern of development, possible hormonal drug ingestion or exposure, general level of nutrition, level of activity, and inquiry about consanguinity because of possible recessive disorders. Also a record of height and weight are helpful since a growth spurt is indicative of pubertal development.

Physical exam should include a complete neurologic exam, fundoscopic exam, visual field check, check for dysmorphism or characteristics of chromosomal abnormalities. Secondary sex characteristics are important to note, especially breast size in girls and testicular size in boys which are first signs of pubertal maturation.

Bone age films are helpful in determining whether there has been delayed or accelerated skeletal maturation. Pelvic ultrasound will help with determining presence or absence of appropriate genitalia for the gender of the child or determining presence of a tumor.

FSH, LH or adrenal androgen serum levels may be helpful in diagnosing a pubertal abnormality. Isolated testosterone, DHEAS, or estradiol levels may be helpful in cases of virilization (testosterone, DHEAS) or feminization (estradiol). Prolactin or thyroid hormone may be measured as the situation indicates.

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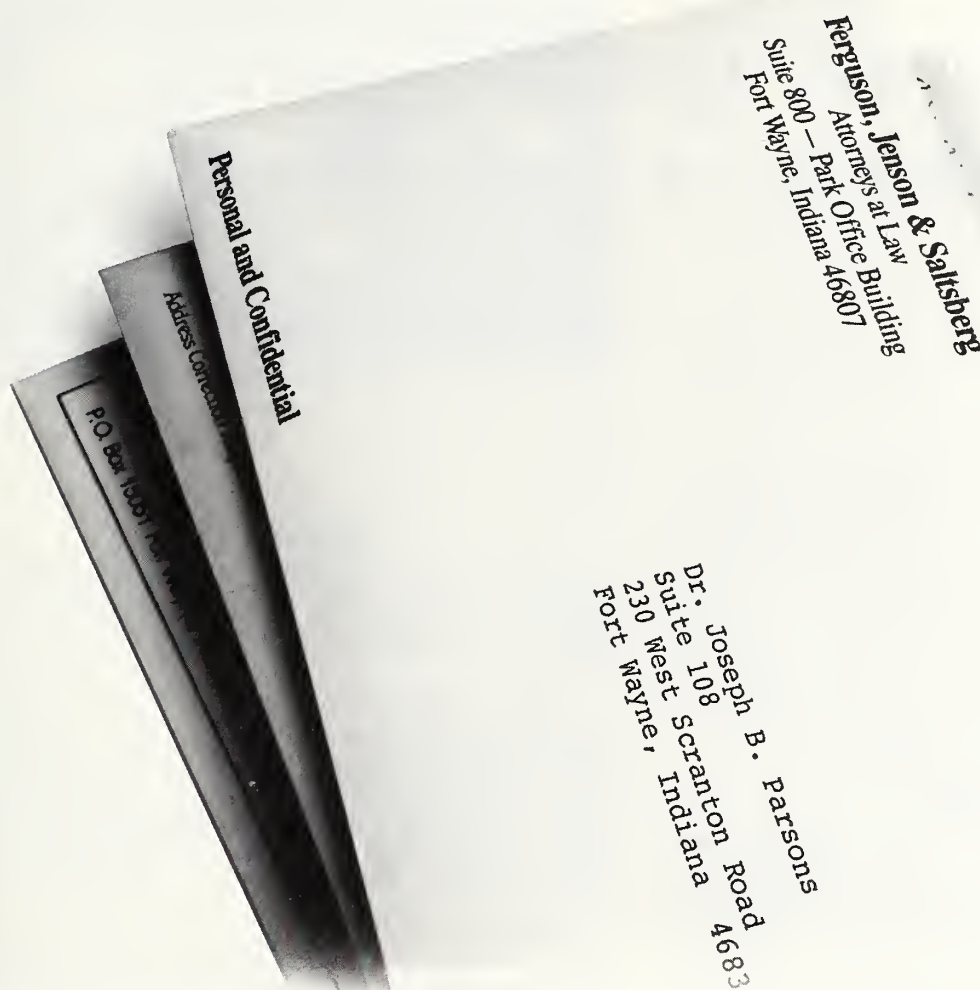
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Non-Hodgkin's Lymphoma in Rotter's Nodes: A case report

Federico L. Ampil, M.D.*

Introduction

Non-Hodgkin's lymphoma, which often involves the peripheral group of lymph nodes,¹ has been infrequently noted in the thoracic wall^{2,3} until the regular use of computer tomography (CT) scanning. This type of involvement is usually by contiguity from disease in the mediastinum or pulmonary parenchyma. The apparent presence of neoplastic disease in Rotter's (interpectoral) nodes not evident on physical examination but demonstrated on CT scan of the chest in a patient was considered important enough to be reported here.

Case Report

A 37-year-old asymptomatic man presented to his family physician with a three-centimeter mass located in the right axilla. The lesion appeared a week prior to consultation. After the mass did not respond to antibiotic therapy, an excision biopsy performed. The histopathologic diagnosis was non-Hodgkin's lymphoma, follicular mixed small cell cleaved and large cell type, according to the "working formulation" classification.⁴ Complete blood count, urinalysis, erythrocyte sedimentation rate, serum protein electrophoresis and bone marrow examination were normal. The only abnormality on CT scan of the chest, abdomen and pelvis was the enlarged interpectoral lymph nodes in the right upper anterior chest wall (Figure 1). Pathologic proof was not available, since further surgical exploration was not deemed clinically warranted.

The patient received involved field megavoltage radiotherapy 4600 cGy given in 23 fractions. Upon completion of irradiation, he had no evidence of disease on clinical examination. A chest CT scan obtained several weeks later disclosed significant disappearance of the initially visualized enlarged interpectoral lymph nodes (Figure 2). The documented response to radiotherapy provided some validity for the clinical

and CT scan interpretation of neoplastic disease in Rotter's nodes.

Discussion

Rotter's nodes can be found lying inferolaterally on the undersurface of the pectoralis major muscle along the course of the supreme thoracic artery (pectoral branch of the thoracoacromial).⁵

Thirty-two women had proven metastatic breast carcinoma in the interpectoral nodes in Kay's report⁶ on the prognostic evaluation of such lymph nodes in radical mastectomy specimens. Of these patients, 30 had histologically documented axillary disease as well. This association between Rotter's and axillary nodes is somewhat similar to the observation in this case report.

The working formulation non-Hodgkin's lymphoma classification⁴ was recently proposed because advances in immunology have revealed that malignant lymphomas are neoplastic proliferations of "B" or "T" cells or true histiocytes. Further-

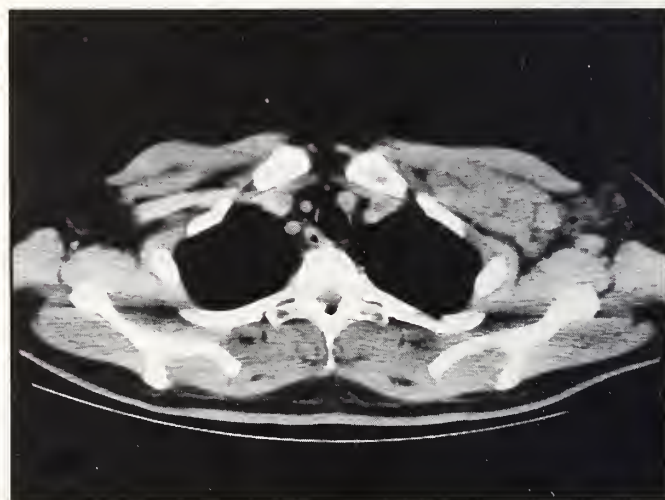


Figure 1. Pre-irradiation computerized axial tomography scan of the upper chest.

St. Mary's Regional Cancer Center, 1808 West Main, Russellville, Arkansas 72801.

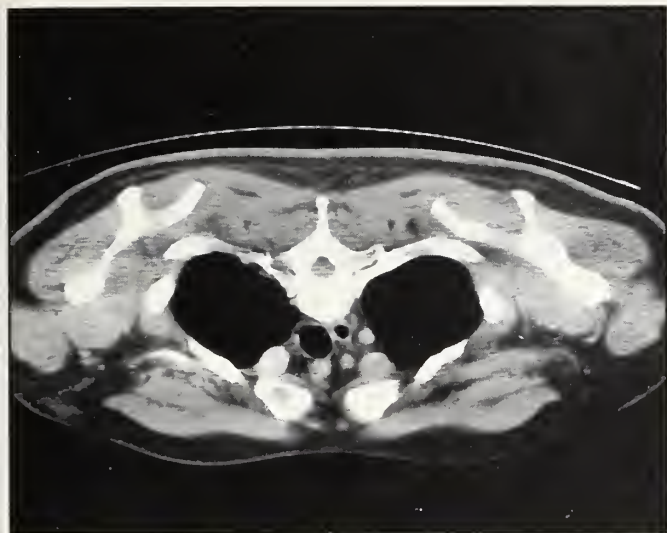


Figure 2. Post-irradiation computerized axial tomography scan of the upper chest.

more, the histiocytic lymphoma in the Rappaport classification has proven to be a neoplastic proliferation of transformed lymphocytes. This new classification essentially divides these tumors into the low, intermediate and high-grade varieties in the order of worsening prognosis. Recent literature^{7,8} has shown adequate correlation between these three different neoplastic grades and the risk of later relapse as well as survival.

Upon CT scan evaluation, up to 14% of the patients with lymphoma were found to have chest wall involvement in two recent reports.^{9,10} Awareness of possible disease in this location is important, as the radiation therapy ports may need to be altered to include the lymphomatous extension in the anterior thoracic wall.

In localized lymphoma, radiation therapy is the treatment of choice for the low grade type (such as in this patient), while radiotherapy with chemotherapy is preferred for those with an unfavorable histology.¹¹

In summary, this case report of non-Hodgkin's lymphoma in Rotter's interpectoral lymph nodes was thought worthy of note as this occurrence has not been well appreciated until recently.^{9,10}

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Thrombolytic Therapy of Acute Myocardial Infarction in a Community Hospital

Paul J. Baxley, M.D., F.A.C.C.* and Charles R. Akin, M.D.

Introduction

Thrombolytic therapy has been shown to salvage myocardium and improve survival when instituted early enough in the setting of acute myocardial infarction.^{1,2} For the most part, the reported experience with thrombolytic therapy has come from clinical trials involving large tertiary care hospitals whose experience with thrombolysis may differ from smaller community hospitals. The purpose of this paper is to report the experience of White River Medical Center, a 130-bed community hospital, with intravenous thrombolytic therapy.

Methods

The records of all patients receiving thrombolytic therapy for acute myocardial infarction were reviewed from January 1987 to July 1988. A total of 32 patients were identified as having received thrombolytic therapy. Care of these patients and the decision to treat with a thrombolytic agent was made by either a cardiologist or internist on the staff at White River Medical Center. Prior history of cardiac disease, specifically previous myocardial infarction and coronary artery bypass grafting, was not addressed in this study, however these conditions did not exclude patients from consideration for thrombolytic therapy. In general, the criteria used for initiating therapy was any patient with ischemic chest pain of duration greater than 30 minutes but less than six hours with associated ST elevation of at least one millimeter in two EKG leads which was unrelieved with nitroglycerin. Contraindications were age greater than 75, uncontrollable hypertension, recent cerebral vascular accident, recent surgery, active peptic ulcer disease, recent trauma including prolonged cardiopulmonary resuscitation and terminal non-cardiac illness. Table I illustrates the clinical characteristics of the treatment groups. The method of recombinant tissue plasminogen activator (t-PA) administration was performed according to the manufacturers recommendations.⁴ Streptokinase was administered in a fashion according to established protocols.^{5,6}

Treatment

All patients received heparin therapy for an average of five days immediately following administration of the thrombolytic agent until time of catheterization or initiation of anti-platelet or Coumadin therapy. Concomitant therapy with aspirin, nitrates, calcium channel blockers or beta blockers were administered at the discretion of the attending physician. The choice of thrombolytic agents was an individual decision by each attending physician, however, there was a trend favoring t-PA during the latter part of the study. All angiography was either reviewed or performed by the authors. Clinical criteria for reperfusion included the presence of any two of the following: immediate relief of pain, decrease in ST elevation on serial EKG's or development of reperfusion dysrhythmia. Creatinine phosphokinase was routinely performed on admission, at 12 hours and 24 hours on all patients. Normal values were 35 to 374 units.

Results

Thirty-two patients received thrombolytic therapy of which 15 received streptokinase and 17 patients received t-PA.

Streptokinase group

The streptokinase group received an average of 1.2 million units of streptokinase per patient, range 750,000 to 1.5 million units.

Symptom duration prior to therapy averaged 102 minutes with a range of 30 minutes to two hours and 45 minutes. Eight

White River Diagnostic Clinic, 407 Virginia Drive, Batesville, AR 72501.

Table I. Clinical Characteristics of the Treatment Groups

	Streptokinase N = 15	t-PA N = 17
Age	60 (36 - 85)	59 (37 - 82)
Sex	9 M 6 F	9 M 8 F
Infarct Loc	8 INF 7 ANT	7 INF 10 ANT
Symptom Duration	102" (30" - 2'45")	94" (60" - 6'30")
Reperfusion Rate	8/15 53%	15/17 88%

of fifteen (53%) met clinical reperfusion criteria. Peak CPK ranged from 655 to 4,078 with a range of 1,798 units. One patient did not have diagnostic enzyme elevation, suggesting aborted myocardial infarction. There were two deaths; however, both were in extremis with shock and/or fulminant congestive heart failure at the time of admission. Four patients underwent selective coronary arteriography at time of discharge of which three had either high grade residual stenosis or complete occlusion of the infarct artery. There were no complications from thrombolytic therapy and no patient sustained a cerebral vascular accident. Average hospital stay was six days, range one to fourteen days and average cost of hospitalization per patient was \$5,500 with a range of \$2,895 to \$9,563. At time of discharge, there were two deaths, nine ambulatory on anti-anginal and anti-platelet therapy and three transferred in a stable condition to a tertiary care facility. The three patients transferred sustained myocardial infarction with evidence of reperfusion and were transferred at the discretion of their attending physician for angiography at a tertiary care facility.

Tissue plasminogen activator group

The t-PA group received an average of 105 milligrams of t-PA per patient, range 100 to 150 milligrams. Symptom duration prior to therapy averaged 94 minutes with a range of 60 minutes to six hours and 30 minutes. Fifteen of seventeen (88%) met clinical reperfusion criteria. Peak CPK ranged from 328 to 4,387 with a range of 2,270 units. Three patients had enzymatic characteristics suggesting aborted myocardial infarction. There were no deaths in this group or cerebral vascular accidents. Two patients did receive single unit transfusions for occult bleeding and one patient developed staphylococcal phlebitis at a peripheral IV site. One patient sustained a large groin hematoma as a result of inadvertent removal of a femoral venous sheath. Ten patients underwent selective coronary arteriography prior to discharge of which all had greater than 75% residual stenosis of the infarct artery. Eight

of these ten were transferred for coronary artery bypass grafting for concomitant left main and/or triple vessel coronary artery disease. Two of these ten were transferred for percutaneous transluminal coronary angioplasty (PTCA). The average hospital stay was 4.81 days with a range of one to 15 days and an average cost per patient of \$10,030 with a range of \$5,700 to \$14,200. Discharge status was one discharged home on medical therapy, eight transferred for coronary artery bypass grafting, two transferred for PTCA and six transferred for angiography at a tertiary facility.

Discussion

This study demonstrates that in select patients in a small community hospital, thrombolytic therapy and post infarction risk stratification with angiography can be safely and effectively performed. The majority of patients (92%) undergoing angiography appeared to have high grade residual stenosis of the infarct artery which resulted in subsequent mechanical or surgical intervention. In all patients undergoing angiography following thrombolytic therapy at White River Medical Center, prior arrangement with a cardiovascular surgeon and a cardiologist experienced in angioplasty was made in the event that mechanical or surgical intervention was deemed necessary. Transfer to a tertiary care facility for surgery or PTCA was accomplished by helicopter transfer with a physician or by ground ambulance with a physician or coronary care unit nurse in attendance. It is strongly recommended by the authors that if angiography is contemplated in a small community hospital in patients having received thrombolytic therapy, plans for an expedient method of transfer and subsequent therapy be formulated. Reperfusion by clinical and angiographic criteria appears achievable in a community hospital at a rate reported in larger studies utilizing major tertiary referral centers; the TIMI Phase I Trial using intravenous streptokinase and t-PA in a double blind randomized comparison trial found an angiographic reperfusion rate of 31% for streptokinase and 61% for t-PA.

As far as differences between the two treatment groups, there did not appear to be a higher rate of reperfusion by clinical criteria using t-PA contrasted to streptokinase, although the use of these criteria as markers for reperfusion has recently been questioned.⁸ Hospital duration appeared to be somewhat shorter with t-PA, however the average cost of hospitalization in the t-PA group was nearly double that of the streptokinase group. The reason for this cost difference may reflect not only the higher cost of t-PA but also a high percentage of patients in the t-PA group undergoing cardiac catheterization prior to transfer or discharge.

This study was too small to allow conclusions regarding the benefits of treating anterior contrasted to inferior myocardial infarction with thrombolytic drugs. Two large studies have shown a reduction in long-term mortality in the treatment of acute myocardial infarction with streptokinase, although the benefit was greatest and only statistically significant in patient with anterior infarction.^{3,9}

Conclusions

Thrombolytic therapy can be safely and efficaciously applied in a community hospital setting to patients with acute myocardial infarction. In view of the frequent finding of high grade residual stenosis in this study it would seem prudent to evaluate all patients receiving thrombolytic therapy prior to hospital discharge with either invasive or non-invasive methods to detect myocardial muscle at jeopardy.

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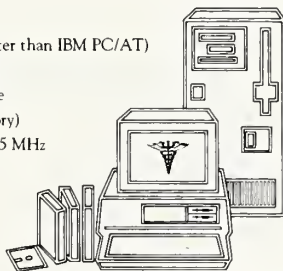
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Female 7

CASES BY RACE

White 61

Black 18

CASES BY RISK GROUP

Homosexual/Bisexual* 50

IV Drug User 3

Hemophiliac 1

Transfusion 6

Heterosexual (Contacts) 5

NIR# 3

* Of the 50 homosexual/bisexuals, 11 are/were IV drug users

No identified risk group (NIR)

CASES BY AGE GROUP

Less than 20 2

20 - 29 26

30 - 39 35

40 - 49 8

50 - 59 3

60 or more 5

OPPORTUNISTIC DISEASE

Pneumocystic Carinii 36

Kaposi's Sarcoma 4

Pneumocystis Carinii

and Kaposi's Sarcoma 2

Other 37

AIDS IN ARKANSAS 1985 - 1988

Total number of cases

reported 169

Number of deaths 94

CASES BY SEX

Male 157

Female 12

CASES BY RACE

White 134

Black 35

CASES BY RISK GROUP

Homosexual/Bisexual* 105

IV Drug User 16

Hemophiliac 1

Transfusion 8

Heterosexual (Contacts) 8

NIR# 4

* Of the 105 homosexual/bisexuals, 27 are/were IV drug users

No identified risk group (NIR)

CASES BY AGE GROUP

Less than 20 2

20 - 29 57

30 - 39 73

40 - 49 24

50 - 59 6

60 or more 7

OPPORTUNISTIC DISEASE

Pneumocystic Carinii 83

Kaposi's Sarcoma 8

Pneumocystis Carinii

and Kaposi's Sarcoma 5

Other 73

Source: Arkansas Department of Health.

LEGALLY SPEAKING



Michael W. Mitchell, J.D.*

RE: Schaefer v. AMS (the Final Chapter)

Introduction

This is the final article regarding the Federal Court litigation filed against the Arkansas Medical Society by its former Executive Vice President. The Eighth Circuit Court of Appeals issued its ruling late this summer.

Background

Paul C. Schaefer (plaintiff) "...literally ran (the) AMS and personally directed its fortunes..."¹ for approximately 25 years while he served as Executive Vice President. In 1956, the AMS adopted a pension plan for its employees. The retirement benefits were based upon a percentage of salary. Approximately a year before plaintiff's retirement, he recommended Amendment 3 to the plan.² The amendment provided for increases in the pension benefits based upon the Consumer Price Index and provided for the inclusion of various business expenses in the figures upon which to determine the amount of the pension benefits. Plaintiff admitted that he made no investigation of the proposed amendments, even though he "...readily sought the advice of experts in the field on every other addition or alteration to the plan...."³ It was undisputed that "...the AMS and the Trustees made no independent investigation of the plan's amendments, and they relied solely on Schaefer's recommendation...."⁴ Although plaintiff was later cautioned by experts that the new provisions would be "tremendously expensive and inflationary" and cautioned as to "whether the Medical Society could afford such costs," he admittedly did not inform the members of the AMS or the Board of Trustees. The plan amendments were adopted and plaintiff retired one month later drawing benefits based upon the amendments.

Eventually, the "skyrocketing expenses" resulted in the Council terminating the plan. Plaintiff filed suit against the AMS and the plan trustees for the increases provided in the terminated plan. The AMS counterclaimed for breach of fiduciary duty and sought money damages. The United States District Court ruled in favor of the AMS holding that plaintiff breached his fiduciary duty because he "misused his position of trust to increase his retirement benefits." The court concluded as follows:

...The plaintiff was guilty...of substantial self-dealing and conflicts of interest...and...he used his position as a trusted employee of [the] AMS and a trustee of the plan to cause the enactment of such provisions without providing the Council or the other trustees with information at his disposal which showed that such provisions would be costly, to say the least, and would ultimately result in the destruction of the plan.⁵

Even though the Court ruled in favor of the AMS, it concluded that the AMS could not recover money damages because the counterclaim was "time barred" by the three year statute of limitations. The AMS contended that the six year statute of limitations applied since there was evidence of "fraud or concealment." The AMS appealed on the issue of statute of limitations. Plaintiff cross-appealed claiming no breach of fiduciary duty.

After briefs and oral arguments in St. Louis, the Court of Appeals affirmed the decision against plaintiff saying as follows:

In examining Schaefer's conduct in accordance with ERISA's prudent person standard, there is abundant irrefutable evidence to support the district court's finding that Schaefer breached his fiduciary duty by failing to investigate properly the feasibility and legality of the COLA and the fringe benefits provision, prior to recommending them to the Council... [T]he record amply supports the district court's findings that Schaefer's

* General Counsel for the Arkansas Medical Society, Mitchell and Roachell, Post Office Box 1510, Little Rock, Arkansas 72203.

actions were motivated by a desire to 'look out for himself,' rather than the interest of the plan's beneficiaries as required by ERISA.... On this record it cannot be doubted that Schaefer breached the fiduciary relation.⁶

The Court of Appeals ruled that in order to prove "fraud or concealment" required for the six year period, three elements were necessary to be proved: (1) course of conduct designed to conceal evidence of wrongdoing, (2) no actual or constructive knowledge of the evidence and (3) the exercise of due diligence. The Court found as follows:

...That the AMS and the Trustees were derelict in not independently investigating Schaefer's suggested amendments to the plan...⁷

Thus, the Court of Appeals ruled that the members of the Board of Trustees failed in their duty to independently investigate the actions of plaintiff and that they were not entitled to rely solely on his recommendation. This latter finding prevents the AMS from recovering money damages from plaintiff.

Conclusion

A fiduciary responsibility is an awesome position requiring active rather than passive participation. The Schaefer case serves as a continuing reminder of the responsibility of officers, trustees and employees in fiduciary positions. An employee must put the interest of his employer above his own personal interest. Now it is time to remember this case only because of the lessons we have learned. Otherwise, may the buried body rest in peace forever more.

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2. The trial court found that "...Schaefer had been told it was illegal to include nontaxable 'fringes' in compensation to determine retirement benefits." Id. p. 20.
3. Id. p. 39.
4. Schaefer v. Arkansas Medical Society, et al. Nos. 87-2404 and 87-2480, Slip op. at 7 (August 15, 1988).
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FROM OTHER YEARS

Arkansas and the Southern Surgical Association

*Gilbert S. Campbell, M.D.**

The Southern Surgical Association celebrated its Centennial at its December 1987 meeting at the Homestead in Hot Springs, Virginia. The Association was founded in 1887 in Birmingham, Alabama as the Southern Surgical and Gynecological Association, but in 1916 adopted its shortened and current name. Most of the active fellows of the limited 300 membership reside in the South, although 35 states and the District of Columbia are represented in its roster.

Dr. Robert S. Sparkman of Dallas, Texas (Past President and Honorary Fellow of the Southern Surgical Association) promoted and gathered historical exhibits from Southern States for display at the Association's 100th anniversary meeting. This article is a brief compilation of Arkansas surgeons who were elected to the Southern Surgical Association during its first 100 years.

James T. Jelks (1849 - 1902)

Graduated from the Medical Department, University of Nashville, Tennessee in 1870 and entered practice in Culloden, Georgia (birthplace of Dr. Alfred Blalock). Served as Chairman of the Surgical Section of the American Medical Association in 1888 and presented a paper at the 1899 meeting of the Southern Surgical on, "A Unique Case of Appendicitis." In closing the paper, Jelks quoted W. W. Keen of Philadelphia who, at the Denver meeting of the American Medical Association somewhat earlier, had said, "I would rather have a live man with an appendix than a dead man without one (applause). I do not believe with the witty Frenchman that no case is complete without a postmortem (laughter)."

John R. Dale (1849 - 1927)

Admitted to Southern Surgical in 1888. Dale was born in Mississippi and was orphaned in infancy. He was reared by his grandmother in Mississippi and after her death during the internecine war, Dale was penniless and without friends. He then moved to Arkansas - the Land of Opportunity. Dale worked in a drug store in Arkadelphia for six years and then went to receive his medical education at both the University of Louisville and Jefferson Medical School in Philadelphia. He returned to Arkadelphia and became a leading citizen, attaining both wealth and prominence. A biographer said that Dale's life shows what a poor boy with pluck can accomplish.

William E. Parker (1867 - 1928)

Parker was a native of New Orleans and graduated with honors from Tulane Medical School. He was a very productive member of the staff of Charity Hospital and a very active member of the Southern Surgical Association. He served as Vice President of the Southern Surgical Association in 1897 and subsequently served his country in Cuba during the Spanish American War. Parker was discharged from the service in wretched physical condition and went to Hot Springs, Arkansas to regain his health. He fell in love with the Spa City and decided to locate there. Parker never married and he told one of his close friends, "I will never marry, there is only one for me - my mother." No photograph was available of Dr. Parker.

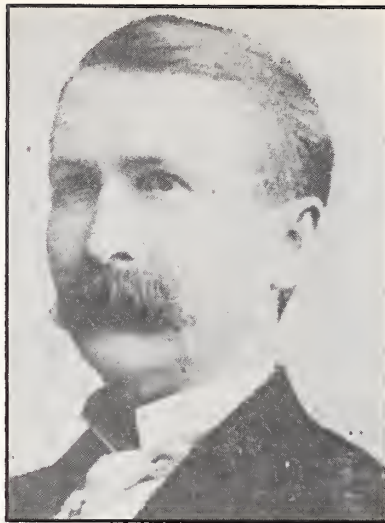
James A. Dibrell (1846 - 1904)

James A. Dibrell, Jr., received his M.D. from the University of Pennsylvania in 1870 and was one of the eight founders of the Arkansas Medical School (1879). Dr. Dibrell was Dean of

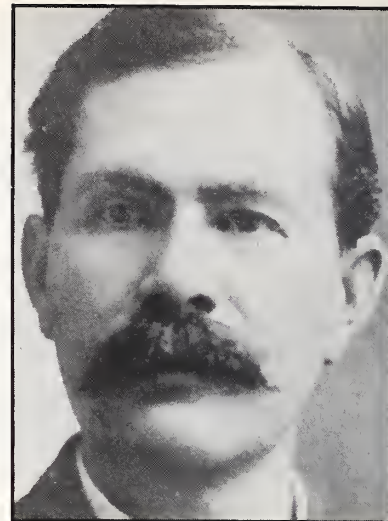
* University of Arkansas for Medical Sciences, 4301 West Markham, Slot 520, Little Rock, Arkansas 72205.



James T. Jelks



John R. Dale



James A. Dibrell

the Medical School from 1886 until his death in 1904. It is of interest that two of the first three Deans of the College of Medicine at the University of Arkansas were surgeons.

**Joseph P. Runyan
(1869 - 1931)**

After receiving his medical degree from Tulane in 1890, Joseph P. Runyan was the second head of the Department of Surgery at the University of Arkansas. He was the Dean and President of the old College of Physicians and Surgeons in Little Rock which competed with the older Arkansas College of Medicine from its organization in 1906 until it merged with the Medical Department of the University of Arkansas in 1912.

**James C. Scarborough
(1881 - 1947)**

James C. Scarborough received his degree from Johns Hopkins in 1908 after which he began working with the renowned Dr. J.M.T. Finney at Union Memorial Hospital in Baltimore until 1912. He then worked at the Mayo Clinic from 1912 to 1914. Dr. Scarborough came to Little Rock in 1915. He was a very reserved, aloof, meticulous, slow surgeon which was in marked contrast to many of the busier surgeons in Little Rock at the time. Dr. Scarborough was Chairman of the Department of Surgery at Arkansas after Dr. Carl Williamson left for Green Bay, Wisconsin in 1928. He remained Chairman until after Trinity Hospital's prepayment plan stirred up so much friction that the Dean of the medical school terminated his appointment in the fall on 1932.

**Malcolm D. Ogden
(1881 - 1947)**

In 1904, Malcolm D. Ogden received his medical degree from the University of Arkansas but it wasn't until 1928 that he was admitted to the Southern Surgical. Ogden and Scarborough were among the first in the United States to develop a prepayment plan for medical

services. The prepayment plan was initiated at Trinity Hospital in Little Rock in 1931. Other plans during that time span were in effect at the Ross-Loos Clinic in Los Angeles (1931) and the Kaiser Foundation (1933). The development of prepayment medical services in the United States occurred first for employees of certain hazardous industries, primarily lumbering, mining and railroading, in areas distant from other medical facilities. There was heated discussion in the Little Rock community of physicians (Pulaski County Medical Society) regarding this rather revolutionary prepayment plan which smacked of socialism. Ultimately the physician members of the Trinity Hospital group who founded this plan resigned from the Pulaski County Medical Society. Subsequently the Secretary of the Arkansas Medical Society notified the Secretary of the Southern Surgical that Scarborough and Ogden were no longer members of the Arkansas Medical Society. According to the bylaws of the surgical association, which requires its members to be members in good-standing in their State Medical Society, both Scarborough and Ogden were dropped from membership



Joseph P. Runyan



James C. Scarborough



Malcolm D. Ogden



Carl S. Williamson



Frederick H. Krock

at the 1933 meeting of the Southern at the Homestead. Dr. Henry Hollenberg was a surgical resident and guest of Dr. Mont Reid at that same 1933 meeting and was saddened by the fact that two fellow Arkansans were dropped from membership in the group. Justice and forgiveness prevailed, for Dr. Henry Hollenberg was President of the Pulaski County Medical Society when Drs. Scarborough and Ogden were re-admitted to membership in the county society some years later. Ogden's pioneering efforts were recognized by his peers as he was elected to be the first President of Group Health Federation of America in 1940.

Carl S. Williamson
(1896 - 1952)

Dr. Williamson came to Arkansas as Chairman of Surgery at the University of Arkansas in 1926, having received his M.D. in 1920 from the University of Pennsylvania. Prior to coming to Arkansas, Williamson had worked in Rochester, Minnesota

with Dr. Frank Mann on experimental production of peptic ulcer. His name persists in surgical history as the Mann-Williamson ulcer. Even more basic was Williamson's work on transplantation as he was the first to understand clearly the rejection phenomenon. It was Williamson who reported that a kidney transplanted from one animal to another showed an entirely different reaction than one moved from one place to another in the same animal. After a couple of years in Arkansas, Dr. Williamson left to become Founder and Director of the Green Bay Clinic in Wisconsin. He is included in this work because of his outstanding contributions to surgery and for his southern exposure as Chairman of Surgery in Arkansas. Had he remained in the South, it is most likely that he would have become a member of the Southern Surgical Association.

Frederick H. Krock
(1900 - 1981)

Dr. Krock was born in Ohio and received his pre-medical education at Western Reserve and Stanford. He received his M.D. from Johns Hopkins in 1925. Dr. Krock served as a resident under the famous Dr. Howard Kelley in Baltimore and shortly thereafter Dr. Krock moved to Fort Smith, Arkansas. After election to membership in the Southern Surgical, Dr. Krock and his wife attended thirty of its next forty meetings. He was the founder of the Holt-Krock Clinic in Fort Smith which now has over 100 members in a multi-specialty setting. It is by far the largest clinic in the state of Arkansas. Dr. Krock served as the President of the Southwestern Surgical Congress from 1959 to 1960.

Henry G. Hollenberg
(1902 -)

After receiving his medical degree from Johns Hopkins in 1928, Dr. Hollenberg acquired his surgical training at the University of Cincinnati under Dr. Mont Reid. After completing this demanding residency, Dr. Hollenberg was down to his lean body mass. With



Henry G. Hollenberg



Edgar J. Poth

encouragement from Dr. Reid, Dr. Hollenberg went to Clifton Springs, New York to work with Dr. Adrian S. Taylor. In 1938, Dr. Hollenberg returned to his home in Little Rock in a well-nourished state. From 1938 until his recent retirement, Dr. Hollenberg set the gold standard for surgical practice in the Little Rock area. During World War II Dr. Hollenberg served as Chief of Surgery at Bushnell General Hospital in Brigham City, Utah.

Edgar J. Poth
(1899 -)

Dr. Poth was born in Sequin, Texas, and received his undergraduate degree at the University of Texas. He later received his medical degree from Johns Hopkins in 1931. Dr. Poth completed his surgical training at Stanford University in 1936 under Dr. Emile Holman. He then served as Chief of Surgery at the University of Arkansas in 1939. After arriving in Little Rock, Dr. Poth had private interviews with each member of the surgery staff and following this he discharged many of the local surgeons from his staff. It would have taken a diplomat to guide the Department of Surgery during its transition from part-time to full-time staff and Poth has never been known for diplomacy. The local surgical scene was not ready for such a rigid taskmaster and Poth did not have the warmth and wit to lessen the friction during this period of transition. In May 1949, Dr. Poth announced his resignation as Head of Surgery at Arkansas in an ad which appeared in both Little Rock newspapers. The ad stated, "I came here in good faith to help establish a first class medical school and have directed my full energies to that end. Since I feel that I am no longer making headway, the only thing to do is withdraw."

Dr. Poth left Arkansas and returned to Johns Hopkins as an Instructor in Surgery and remained there for two years prior to accepting a full-time position in the Department of Surgery at the University of Texas in Galveston where he has been most productive, having a Professor of Surgery for 45 years. His studies on bacterial flora of the bowel and antimicrobial bowel preparation have been widely acclaimed.

Gilbert O. Dean
(1910 -)

Dr. Dean was an honor student at the University of Arkansas Medical School who, after receiving his medical degree in 1936, spent five years in postgraduate training in Surgery at the University of Iowa. Dr. Dean served as a U.S. Navy physician during World War II. Shortly after returning to Little Rock he was appointed Chairman of the Department of Surgery in 1947. In 1949 Dr. Dean appointed Dr. Walter F. Becker as Instructor in Surgery. Dr. Becker had just completed his residency in Surgery at the Lahey Clinic and at the University of Virginia. Dr. Becker was appalled by the slovenliness of the Arkansas



Gilbert O. Dean



Walter F. Becker

Medical School and stated, "You wouldn't believe the conditions I found in Arkansas. The students were barbaric, both in their mode of speech and dress."

Walter F. Becker
(1917 - 1981)

Dr. Becker left Arkansas after one year and joined Dr. Howard Mahorner in the practice of surgery in New Orleans and remained in his beloved Crescent City until his death in 1981. During the four years that Gilbert Dean was Chairman of the department the medical school had four different deans. Gilbert Dean and Warren Murry (Arkansas M.D. 1947, top of his class) authored a paper on "Volvulus of the Sigmoid Colon" which was presented at the Southern Surgical Association in December 1951 at the Homestead. Dr. Dean resigned as Chairman of Surgery that same year.

Other members of the Southern Surgical Association include:

Gilbert S. Campbell (1924 -). M.D., University of Virginia - 1946, Ph.D. University of Minnesota - 1954. Elected to Southern Surgical Association in 1967.

Fred T. Caldwell (1925 -). M.D., Washington University - 1950. Elected to Southern Surgical Association in 1972.

Bernard W. Thompson (1925 -). M.D., University of Arkansas - 1949. Elected to Southern Surgical Association in 1975.

John D. Olson (1912 -). M.D., University of Pennsylvania - 1938. Elected to Southern Surgical Association in 1976 and currently serving on the editorial board of the *Journal of the Arkansas Medical Society*.

Robert W. Barnes (1936 -). M.D., University of Illinois - 1961. Elected to Southern Surgical Association in 1984.

THINGS TO COME

JANUARY 23-27

Diagnostic Radiology. Sponsored by Postgraduate Education, University of California. Ixtapa, Mexico. Twenty-five Category I hours available. Fee: \$495, physicians; \$395, residents, fellows, technologists and nurses with letter of verification. For registration information, call (415) 476-5808; program information call (415) 476-5731.

FEBRUARY 10-12

Advanced Medical Staff Strategies for Leadership in Quality Assurance. Sponsored by the California Association of Hospitals and Health Systems. Sheraton Santa Barbara Hotel and Spa, Santa Barbara, California. Eleven Category I credit hours. Fee: \$430. For further information contact the Joint Commission Accreditation of Healthcare Organizations, 875 North Michigan Avenue, Chicago, IL 60611-1846; (312) 642-6061, ext. 650.

FEBRUARY 10-12

Current Concepts in Pediatric Medicine. Sponsored by the AAP Colorado Chapter. San Diego Marriott and Marina, San Diego, California. Eighteen Category I credit hours. Fee: AAP Resident Fellow, \$220; AAP Candidate Fellow, \$220; AAP Fellow, \$300; Non-member physician, \$365; Allied Health Professional, \$220. For further information, contact CME Registration, Department of Pediatrics, AAP, Post Office Box 927, Elk Grove Village, IL 60009-0927; 1-800-433-9016; extension 7657.

FEBRUARY 19-24

Twentieth Family Medicine Review - Session I. Sponsored by the University of Kentucky, College of Medicine. Lexington, KY. AMA Category I credit available. For further information, call Joy Greene, (606) 233-5161.

FEBRUARY 19-24

Diagnostic Imaging Update: 1989. Sponsored by Postgraduate Education, University of California. Park City, Utah. Twenty-three Category I hours available. Fee: \$495,

physicians; \$395, residents, fellows, technologists and nurses with letter of verification. For registration information, call (415) 476-5808; program information call (415) 476-5731.

FEBRUARY 25-26

Automated Percutaneous Disectomy Workshop. Sponsored by Radiology Postgraduate Education, University of California. Hyatt Regency Hotel, Embarcadero, San Francisco, California. Eleven Category I hours available. Fee: \$1,000. For registration information, call (415) 476-5808; program information, call (415) 476-5731.

FEBRUARY 25-MARCH 4

Winter Seminar. Sponsored by the Medical Education Department of Baptist Medical Center. Snowmass, Colorado. Twenty Category I credit hours. Fee: \$200, physicians; \$100, nurses and other healthcare professionals. For further information, write Medical Education Department, Baptist Medical Center, 9601 Interstate 630, Exit 7, Little Rock, Arkansas 72205-7299; or call (501) 227-2672.

MARCH 5-10

Magnetic Resonance Imaging: Update 1989. Sponsored by Radiology Postgraduate Education, University of California. Snowbird, Utah. Twenty-five Category I credit hours. Fee: \$495, physicians; \$395, residents, fellows, nurses, and technologists. For further information, write or call, Radiology Postgraduate Education, University of California School of Medicine, Room 324, San Francisco, CA 94143-0628; (415) 476-5731.

MARCH 30 - APRIL 1

Pediatric Trends. Sponsored by the American Academy of Pediatrics. Waiohai Hotel, Kauai, Hawaii. Sixteen Category I credit hours. Fee: AAP resident/fellow or allied health professionals, \$220; AAP fellow, \$300; non-member physician, \$365. For further course and transportation information, contact CME Registration, Department of Education, American Academy of Pediatrics, Post Office Box 927, Elk Grove Village, IL 60009-0927; or call 1-800-421-0589.

KEEPING UP

Cholesterol: Current Concepts for Physicians

Self-Study Course for Physicians. Sponsored by the National Health, Lung and Blood Institute. A national cholesterol education program is available through the Arkansas Medical Society office in which a physician studies at home. Two hours Category I credit. Further information: David Wroten, Arkansas Medical Society, P. O. Box 5776, Little Rock, AR 72215; (501) 224-8967.

Pediatric Allergies

January 24, 1989, 12:30 p.m. Presented by J. T. Howell, M.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Poison Treatment & Prevention

January 26, 1989, 12:00 noon. Presented by Greg Kearnes, Pharm D. Sponsored by AHEC - Fort Smith. Seventh Floor Dining Room, Sparks Regional Medical Center. One Category I credit hour.

Internal Medicine Conference

February 7, 1989, 12:30 p.m. Presented by L.C. Price, M.D. Sponsored by AHEC - Fort Smith. Medical Library,

Sparks Regional Medical Center. One Category I credit hour.

Childhood Seizures

February 8, 1989, 12:00 noon. Presented by Stephen Bates, M.D. Sponsored by AHEC - Fort Smith. Seventh Floor Dining Room, Sparks Regional Medical Center. One Category I credit hour.

OB Lecture Series

February 13, 1989, 1:00 p.m. Presented by William Harrison, M.D. Sponsored by AHEC - Northwest. AHEC-NW, 241 W. Spring, Fayetteville. One Category I credit hour.

Cardiology Seminar

February 24, 1989. Sponsored by Baptist Medical Center. For further information, contact BMC Medical Education, (501) 227-2672.

Winter Seminar 1989

February 25 - March 4, 1989. Presented by Baptist Medical Center CME Programs. The Crestwood, Snowmass, Colorado. 20 Category I credit hours. Fees: \$200, physicians; \$100, nurses and other healthcare professionals. For further information contact, BMC Medical Education, (501) 227-2672.

Recurring Education Programs

As organizations accredited for continuing medical education by the Arkansas Medical Society, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), each Friday, 12:15 p.m., Conference Room, Building 1, VAMC
Mortality/Morbidity Conference, fourth Wednesday, 2:45 p.m., Conference Room, Building 1, VAMC

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon, varying topics, alternating Fridays, 12:30 p.m., Classrooms, AMI National Park Medical Center

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom

Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Second Floor Classroom
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Sturgis Building, Rooms S120-121
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium. A meal is provided.
Cancer Conference, third and fourth Thursday, 12:00 noon, Southwest Bell Room A meal is provided.
General Medicine Journal Club, each Tuesday, 12:00 noon, Petit Jean Room. Bring your own lunch.
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library. A meal is provided.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Maumelle Room. Refreshments are provided.
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory. Refreshments are provided.
Pediatric Conference, first Tuesday, 12:30 p.m., Maumelle Room. A meal is provided.
Peripheral Vascular Disease Conference, fourth Tuesday, 6:00 p.m., Maumelle Room. A meal is provided.
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, DeSoto Room. A meal is provided.

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and case presentations. A light lunch is provided.
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium. A light lunch is provided.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES - LITTLE ROCK

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Conference Series, times and dates vary, UAMS Education Building, Room G/110 A&B
Anesthesia Morbidity and Mortality Conference, every second and fourth Tuesday, 6:45 a.m., UAMS Education Building, Room G/110 A&B. Every first, second and third Thursday, 4:00 p.m., Room G/112 A&B.
Child Psychiatry Clinical Case Conference, first Friday, 1:00 p.m., UAMS Child Study Center Conference Room.
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium
Medicine Research Conference, each Wednesday, 4:30 p.m. Shorey Building, Room 3506
Neurology Clinical Case Conference, three or four Thursdays per month, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.
Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (7D33) and LRVAMC (Autopsy Room).
Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7D33.
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Basic Science Conference, occasional Tuesdays, 11:00 a.m., UAMS Education Bldg., Room B/135.
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds/Clinical Case Conference, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building, Room 159
Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Morbidity and Mortality Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A.
Surgery Resident Case Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A
Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Conference, last Wednesday, 5:00 p.m., UAMS
Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS
VA Diagnostic Imaging Conference, every Tuesday, Wednesday and Thursday, 8:00 a.m., LRVA Nuclear Medicine Conference Room, Room 1D173
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., NLRVA, Building 66, Room 38
VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., NLRVA Building 89, Conference Room, or Arkansas Rehab Institute
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Surgery Service General Chest Topics (Combined Surgery/Medicine Lung Conference), every other Monday, 12:15 p.m., LRVA, Room 2D109.
VA Surgery Service Lung Cancer Conference, every Tuesday, 3:00 p.m., LRVA, Room 2E142.
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Tumor Conference, each Tuesday, 1:00 p.m., VAMC, Room 2D109

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pediatric Conference, third Friday, 12:15 p.m., Union Medical Center.
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

Cardiology Lecture Series, first Monday, 1:00 p.m., Washington Regional Medical Center
City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital
Family Medicine Conference, varying dates through January and February, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville. Contact AHEC - NW for list of dates.
Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, every four months, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, MO
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pochahontas
Neurological-Neurosurgical Conference, first Monday, 12:00 noon, St. Bernard's Dietary Conference Room
Neuroradiology Conference, second Friday, 12:00 noon, St. Bernard's Dietary Conference Room
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Wynne Tumor Conference, third Tuesday, 6:00 p.m., Grecian Steak House, Wynne, every four months.

PINE BLUFF-AHEC

Behavioral Science Conference, first and third Thursday, 12:30 p.m., Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:30 p.m., Jefferson Regional Medical Center
Family Practice Conference, first and fourth Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Geriatrics Conference, third Friday, 12:30 p.m., Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Orthopedic Case Conference, second and fourth Thursday, 12:30 p.m., Jefferson Regional Medical Center.
Pediatric Conference, third Wednesday, 12:30 p.m., Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:30 p.m., Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, fourth Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Surgery Conference, first Friday, 12:30 p.m., Jefferson Regional Medical Center
Tumor Conference, first Wednesday, 12:30 p.m., Jefferson Regional Medical Center

TEXARKANA-AHEC

Cardiology Conference, alternating Fridays, 11:30 a.m., St. Michael Hospital
Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital.
Cine Radiology, second Friday, 12:00 noon, Wadley Regional Medical Center.
Echo-Cardiology, fourth Friday, 12:00 noon, Wadley Regional Medical Center
Internal Medicine Conference, second Tuesday, 12:00 noon, St. Michael Hospital
Neuro-Radiology Conference, second and fourth Wednesday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Surgeons Pathology Conference, varying dates, 7:00 a.m. breakfast, Wadley Regional Medical Center
AHEC Tumor Conference, first Wednesday, 7:00 a.m. breakfast, St. Michael Hospital

MEDICINE IN THE NEWS

Training Program Helps Direct Care Staffs Learn HIV/HBV Infection Control

Nurses, physicians, and other medical staff members face an increasing need to know how to reliably protect themselves and patients against hepatitis B and AIDS infections. For example, the Centers for Disease Control (CDC) estimate 300,000 infections per year from HBV alone.

An education and training program, "AIDS/Hepatitis B: Infection Control, Protecting the Medical Staff," recently became available and is already being used by health care personnel throughout the nation. The program meets existing and proposed Occupational Safety and Health Administration (OSHA), Joint Commission on Accreditation of Hospitals (JCAH) and CDC inspection guidelines.

The comprehensive instruction/video program, developed by TRIAD of St. Paul, includes concerns, modes of transportation, virus inactivation, universal precautions, environmental considerations and accidental exposure. It also includes an instructor's workbook, employee training modules, videotape and protective documentation forms for claims.

Once the package is purchased, authorized users will receive replacement packages incorporating OSHA, CDC, and JCAH guideline changes as they occur.

Further information about the "AIDS/Hepatitis B: Infection Control" program is available through TRIAD by calling 1-800-727-9700.

Physicians Encourage Prevention through AHA's Heart R_x Program

Physicians in Arkansas are working with the American Heart Association, Arkansas Affiliate, to provide a new service to their patients called "Heart R_x".

The program includes brochures, posters and other materials covering information about the major risk factors of heart disease and stroke, along with materials about the early warning signs of heart attack.

The three major risk factors for cardiovascular disease (CVD) are high blood pressure, cigarette smoking, and elevated blood cholesterol levels. Through the "Heart R_x" program, a physician can help increase the patient's awareness of these factors as a routine part of an examination.

According to Anthony Bennett, M.D., president of the American Health Association's Arkansas Affiliate, "Heart R_x" enables the patient to receive information and counsel-

ing about healthier lifestyle choices during a regular visit to the doctor. Changes in certain habits can dramatically reduce the patient's risk of premature death or disability from heart diseases and stroke - the leading causes of death in this country.

Physicians who could be assisted by members of their offices' health care team (including a nurse, physician's assistant, patient educator, and/or dietitian) use materials provided by the AHA to work with patients. The program is designed to increase intensity, depending on the patient's need and his or her ability to understand the materials.

Level I, a low-intensity version of the program, utilizes educational materials in the reception area of examining room. The Level I objective is to increase awareness of controllable CVD risk factors. In Level II self-help tools are provided to patients. These may include contracts and self-monitoring diet logs. Also at this level, the physician can provide materials on how to stop smoking. Level III, in which the physician counsels with the patient and used "Heart R_x" materials to follow-up and reinforce the counseling process, is the most intense element of the program.

"Physicians are respected by their patients," Bennett added, "so they have an important and unique opportunity to influenced patients' decisions.

For more information about the "Heart R_x" program, physicians may call or write the AHA, Arkansas Affiliate, Post Office Box 1610, Little Rock, AR 72203, 375-9148.

Arkansas Caduceus Club Wins Top Award

The Arkansas Caduceus Club, the organization of alumni of the College of Medicine at the University of Arkansas for Medical Sciences, received the "Award of Distinction" for alumni programs at a recent meeting of the American Association of Medical Colleges in Chicago. The award, presented by the AAMC's Group on Public Affairs, is based on the excellence and diversity of the organization's overall activities as they promote academic medicine in the United States.

David Jacks, M.D., of Pine Bluff, immediate past president of the Arkansas Caduceus Club, was president during the time for which the Caduceus Club's activities were judged. Jack Blackshear, M.D., of Little Rock, is the current Caduceus Club president.

Mrs. Janet Honeycutt, executive director of the Caduceus Club, submitted a notebook highlighting the organization's

programs and activities. The entry included activities in five categories - Students, Housestaff, College of Medicine, Alumni (and other members) and Communications.

"Everything the Caduceus Club accomplishes is made possible by the generosity and dedication of its members," Mrs. Honeycutt commented. "Our membership includes all physicians practicing in Arkansas, our faculty, current and former house officers, and alumni from the College of Medicine. This outstanding group is very supportive of the College of Medicine.

The AAMC Group on Public Affairs represents 127 medical college and all teaching hospitals nationwide.

AMA Launches American Medical Television

The American Medical Association has announced the creation of American Medical Television, a programming service offering focused, timely information and new perspectives on clinical, ethical, regulatory and socioeconomic issues of interest and importance to practicing physicians. The two-hour programming block will air on The Discovery Channel every Sunday from 10 a.m. until 12:00 noon Eastern time. Regular programming on American Medical Television will debut Sunday, January 8, 1989.

American Medical Television carries Continued Medical Education (CME) credits for its programs. Regular features will include AMA VideoClinics and Video Updates, plus a

monthly program called Washington Update which will feature news and discussion on health care issues and regulatory developments from the nation's capital. Hospital Satellite Network will provide a half-hour program for American Medical Television.

Programming for American Medical Television is developed in consultation with medical specialty organizations and leading medical schools. "We expect these programs to have dramatic impact," said Dr. James Sammons, AMA Executive Vice President. "Programs viewed on Sundays by physicians can have an immediate affect on the way they treat patients the following day. Medical television is an extremely powerful and effective educational tool. American Medical Television is the latest example of the AMA's commitment to good medicine through continuing education."

American Medical Television will air on The Discovery Channel, the fastest growing cable network. It features 18 hours each day of documentary programming specifically devoted to science, nature, technology, history, human adventure and world exploration. The Discovery Channel has been on the air since June, 1985 and has rapidly built a substantial subscriber base. It is now carried on more than 4,000 cable systems and found in more than 36.6 million U.S. households (A.C. Nielson, October '88). Demographic research has demonstrated that The Discovery Channel attracts a well-educated, upscale viewer with its documentary and scientific programming mix.

INTERNIST/OB-GYN FAMILY PRACTICE

The Millard-Henry Clinic in RUSSELLVILLE, AR, is seeking one each of the above specialists to join a growing and lucrative group of 18 doctors. All applicants must be Board Certified or Eligible.

Excellent practice growth, great community, salary plus bonus in first year.

For more information contact Don Loudon, Administrator, 501-968-2345.

CONNIE HIERS, M.D.

Diplomate of AMERICAN BOARD OF PLASTIC SURGERY

Dr. Hiers limits her practice to plastic and reconstructive surgery. This includes a wide variety of procedures including:

Head and Neck Surgery - for example...

lacerations; facial fractures; cosmetic surgery, such as face lifts, blepharoplasty; septorhinoplasty; cancer ablation and reconstructive procedures; congenital defects, such as cleft lip and palate; tumors and soft tissue defects; burns

Hand Surgery - for example...

fractures; diseases, such as arthritis; lacerations; tendon, artery, nerve and skin repair; removal of tumors; burns

Cosmetic Surgery - for example...

abdominoplasty ("tummy tuck"); suction lipectomy; breast augmentation, reduction, and lifts; dermabrasion; chemical peel; hair transplants; collagen injections

Reconstructive Surgery - for example...

congenital defects, such as ears, nose; breast reconstruction; burns; trauma; disease, such as cancer, pressure ulcers; chest wall defects; scar revisions; maxillofacial surgery.

OUTPATIENT CLINICS AT THE FOLLOWING HOSPITALS:

GRAY'S Batesville, AR 793-2321	HARRIS Newport, AR 523-8911	LUCY LEE Poplar Bluff, MO 314-785-7721	1204 W. Kingshighway Paragould, AR 935-0861
OZARK MEDICAL CENTER West Plains, MO 417-257-7040	CROSS COUNTY Wynne, AR 935-0861	RANDOLPH COUNTY Pocahontas, AR 892-4511	

816 B. Rains St. • Jonesboro, AR • 501-935-0861
Outpatient surgery available in office.

AMS NEWSMAKERS

James J. (Jim) Pappas, M.D., has been elected as the 1988-1989 national president of the Centurions of the Deafness Research Foundation. The Centurions are a national group of otolaryngologists who underwrite the administrative costs of the Deafness Research Foundation, thereby allowing all of the donations to go to research.

The Baxter County Health Services Foundation recently received a generous donation of \$100,000 from **James Dunbar, M.D.**, a Mountain Home family practitioner. Dr. Dunbar donated the funds to help build a new cancer treatment center and outpatient facilities at the county regional hospital.

Dr. Frank Padberg, a neurological surgeon and clinical professor of surgery, recently received the Distinguished Service Award by the American College of Surgeons. Dr. Padberg is the current director of the department of fellowship and graduate education of the American College of Surgeons in Chicago.

Dr. John D. Ashley was presented a portrait of himself which will be displayed in the lobby of the Newport Hospital. Dr. Ashley, an internist and life member of the Arkansas Medical Society, was recognized for 39 years of medical practice in Newport.

Dr. J. F. Gartman was the honoree at the recent "appreciation day" in Carlisle. Dr. Gartman has been a family practitioner for 32 years. Among the awards given to Dr. Gartman were a citation from the Arkansas House of Representatives and a certificate of merit on behalf of Governor Bill Clinton.

Dr. Jerry Mann, a Little Rock family practitioner, was named chairman of the committee on Drugs and Devices for the American Academy of Family Physicians at the recent National Council for patient information and education. Dr. Mann was the representative of the American Academy of Family Physicians at the council meeting.

NEW MEMBERS

PULASKI COUNTY MEDICAL SOCIETY

McGriff, Lloyd, General Surgery, Little Rock. Born January 12, 1953, Havana, FL. Pre-medical education, Florida A & M University, Tallahassee, B.S., 1975. Medical education, Meharry Medical College, Nashville, TN, 1989. Internship/residency, Meharry Medical College and Harlem Hospital Center, New York, NY.

Tabor, Marcella A., Family Medicine, Little Rock. Born January 16, 1959, Cleveland, OH. Pre-medical education, University of Notre Dame, South Bend, IN, B.S. 1981. Medical education, Philadelphia College of Osteopathic Medicine, 1985. Internship, Metropolitan Hospital-Central. Residency, UAMS. Board eligible.

SEBASTIAN COUNTY MEDICAL SOCIETY

Chambers, Donald S., Psychiatry, Fort Smith. Born June 24, 1935, Little Rock. Pre-medical education, St. Louis University and University of Arkansas at Fayetteville, B.A., 1957. Medical education, University of Arkansas for Medical Sciences, 1961. Internship, Flower Hospital, Toledo, Ohio. Residency, Washington University, St. Louis, Missouri. Military experience, United States Army Medical Staff, 1962-65; United States Navy Medical Staff, 1980-84. Previous practice, Fort Smith, 1968-80; United States Navy, 1980-84; Little Rock, 1984-86; and Fort Smith, 1986 present. Board certified, Psychology and Neurology. Member, AMA, APA, ARMA, ARPA, APPL, ACFP.

IN MEMORIAM

DR. SANFORD C. MONROE

Sanford C. Monroe, 76, a retired Pine Bluff internist, died Monday, November 21, 1988.

Dr. Monroe was a veteran and had served in Alaska as chief of medicine at Fort Richardson in Anchorage. He also served in Germany, retiring as a lieutenant colonel.

He moved to Pine Bluff in 1946 and was one of the founders

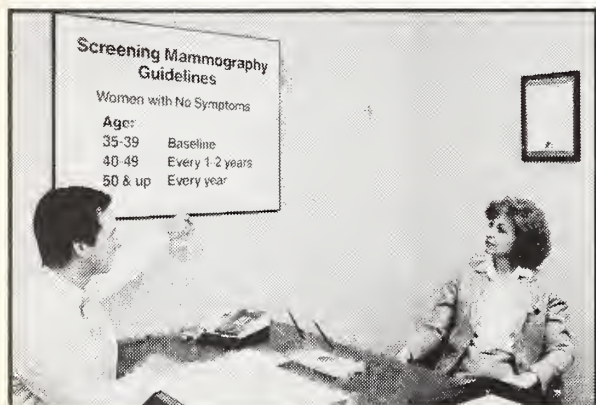
of the Doctors Clinic which later became Medical Associates. He was a Life Member of the Arkansas Medical Society.

Dr. Monroe is survived by his wife, Anne Huff Monroe; two daughters, Mrs. Hugh B. Gage Jr. of Atlanta and Isabelle Monroe of Pine Bluff; a brother, T. Archie Monroe of Magnolia, and three grandchildren.

Family Practice/Urgent Care

Join a group of seasoned peers who have been in the trenches and who want to control their practice of medicine rather than vice-versa.

If you would like general medicine with no call; if you want to reclaim your freedom, have more time for your family, and divorce yourself from all the problems associated with modern practice, i.e., exorbitant office overhead, personnel problems, tyrannosaurus-like medical record departments, phone Sandy McBrayer at 1-601-328-2525 (collect).



What will you tell her about screening mammography?

Many of your patients will hear about screening mammography through a program launched by the American Cancer Society and the American College of Radiology, and they may come to you with questions. What will you tell them?

We hope you'll encourage them to have a screening mammogram, because that, along with your regular breast examinations and their monthly self examinations, offers the best chance of early detection of breast cancer, a disease which will strike one woman in 10.

If you have questions about breast cancer detection for asymptomatic women, please contact us.



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Reston, Virginia 22091
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BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE

There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED

CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by C's on the other. Issued 1/87

Reference:

1. Eliakim R, Ophir M, Rachmilewitz D. *J Clin Gastroenterol* 1987;9(4):395-399.

Another patient benefit product from



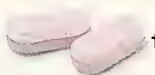
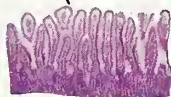
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Carafate[®] for the ulcer-prone NSAID patient

Aspirin and other nonsteroidal anti-inflammatory drugs weaken mucosal defenses, which may lead NSAID users to become prone to duodenal ulcers! For those NSAID users who do develop duodenal ulcers, CARAFATE[®] (sucralfate/Marion) is ideal first-line therapy. Carafate rebuilds mucosal defenses through a unique, nonsystemic mode of action. Carafate enhances the body's natural healing ability while it protects damaged mucosa from further injury. So the next time you see an arthritis patient with a duodenal ulcer, prescribe nonsystemic Carafate: therapy for the ulcer-prone patient.



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sucralfate/Marion

THE LOWER RESPIRATORY TRACT— More vulnerable to infection in smokers and older adults



Experience counts

Ceclor[®] Pulvules[®]
250 mg
cefaclor
think of it first

For respiratory tract infections due to susceptible strains of indicated organisms.

Summary.
Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci).

Contraindication: Known allergy to cephalosporins

Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.
Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Ceclor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Ceclor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in

moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.

- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.

- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Ceclor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Ceclor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
 - As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
 - Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypertension, dizziness, and somnolence have been reported.
 - Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%; and, rarely, thrombocytopenia.
- Abnormalities in laboratory results of uncertain etiology**
- Slight elevations in hepatic enzymes.
 - Transient fluctuations in leukocyte count (especially in infants and children).
 - Abnormal urinalysis: elevations in BUN or serum creatinine.
 - Positive direct Coombs' test.
 - False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinitest[®] tablets but not with Tes-Tape[®] (glucose enzymatic test strip, Lilly).

(061088L)

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Eli Lilly and Company, Indianapolis, Indiana 46285



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Carolina, Puerto Rico 00630

Arkansas Medical Society

Committee on Medical Legislation



1989 Legislative Proposals

INTRODUCTION

January 9, 1989, marked the beginning of the 77th Session of the Arkansas General Assembly. Each year more and more medical-related issues are being considered by the Arkansas legislators . . . issues that have a tremendous impact on patient care, clinic administration, and physician reimbursement.

This insert contains a brief synopsis of several key issues that will effect the practice of medicine. Through discussions with legislators and other health-related groups, we have identified a list of probable legislative proposals.

Also, the AMS Medical Legislation Committee has taken a proactive role in developing legislative proposals designed for the benefit or protection of physicians and their patients. This model legislation is also discussed in this special legislative review.

Because medical issues are often complex, it is imperative that AMS members familiarize themselves with the issues and discuss them with their local legislators. AMS members are also urged to read the weekly legislative updates and respond to requests for legislator contact. Amendments to proposed bills can completely change the intent of legislative issues and it is important for physicians to keep up-to-date on the progress of individual pieces of legislation.

The members of the AMS Medical Legislation Committee have devoted many hours in both identifying issues damaging to the profession and preparing model legislation that will better serve the profession. All these efforts will be for naught unless individual physicians, statewide, respond to the legislative process when needed.

PROBABLE MEDICAL LEGISLATION

MALPRACTICE/LEGAL ISSUES

1. Prejudgment interest.

This proposal simply allows interest to accrue from the time a lawsuit is filed (i.e. if a physician is sued for \$1 million and it takes four years to get to court, then by the time you finish court proceedings, the judgement is approximately \$1.4 million). Since trial lawyer fees are based upon a percentage of the judgement or settlement, this would obviously work to their advantage. The malpractice insurers tell us that this would increase Arkansas physicians malpractice premiums by 25%.

2. Civil immunity for OBG services provided in conjunction with the Health Department.

Many areas of the state are facing a real crisis in regard to the number of physicians providing OBG services. The Medical Society in conjunction with Dr. Elders of the Health Department is studying proposals that would in effect make those doctors who provide delivery services to persons seen by the Health Department, independent contractors (employees) of the Arkansas Department of Health. This might afford them the same immunity protection that state employees enjoy.

3. Qualifications for expert witnesses.

The Society staff is currently reviewing the statutes from several states in regard to expert witness in medical malpractice cases. Legislation is being considered which would severely restrict those persons who might qualify (i.e. at least 70% of the physician's income must come from the practice of medicine in his specialty and/or the physician may be required to live in a specific locality to assure the same local standard of care).

4. Uniform Health Care Information Act.

This is model national legislation that will go into effect in October, 1989. The bill is designed to provide protection to hospital peer review committees.

OTHER HEALTH CARE PROVIDERS

1. Expanded activity by pharmacists.

There are rumblings by a few pharmacists that they would like to expand their practice to such things as prescribing, giving injections, ordering lab work, etc. The AMS is opposed to this and has several alternate bills in case this is introduced.

2. Physical therapists practicing without physician referral.

This bill would allow the physical therapists to provide direct care without a physician's referral. It is the Medical Society's opinion that the physical therapists are not qualified to diagnose. Many health problems mimic others and should only be treated after a physician has diagnosed the problem. This will result in another direct provider to be reimbursed by health and/or workers compensation insurance, causing another drain on an already overburdened and expensive system.

3. Mandated benefits for social workers.

Social workers will probably come again with a bill that will allow them direct access to patients and mandates insurance coverage for treatment of those patients. Past proposals have included reimbursement at the same levels as psychiatrists.

4. Expanded activity by lay midwives.

Because there are areas of the state that have very few physicians who still deliver babies, the increased activity by lay midwives is a problem that is not going away and perhaps one that should be dealt with. Our concern, of course, is the accepting of liability by a physician who agrees to be the supervisor for a lay midwife. A regulation was proposed this past summer that would have allowed lay midwives to appoint physicians as their supervisors. This regulation was tabled and will probably return in the form of legislation.

5. Rural hospital legislation.

There are several study committees currently undertaking the problems with rural hospitals. There will likely be many legislative proposals introduced in the upcoming session.

PHARMACY ISSUES

1. Open Medicaid drug formulary.

Under the guise of cost containment, there is a very restrictive Medicaid drug formulary for the treatment of eligible patients. Many physicians question the efficacy of some of the approved drugs over others and whether the state is really saving money in the long run. Under the current system, a physician is restricted in the drugs he feels might best meet the needs of his patients. We do feel doctors would be cost conscious and would not abuse the Medicaid program.

2. Classification/regulation of anabolic steroids.

Due to the increased awareness of the illegal use of steroids, there may be efforts to reclassify the drug and/or stiffen the penalties for its use.

3. Triplicate prescription.

The Drug Enforcement Administration (D.E.A.) has sent a letter to every state governor requesting that they have a triplicate prescription bill in their legislation package. This bill will require doctors to fill out their prescriptions on sequentially numbered pads which must be secured in the physician's office. One copy would be kept in the doctor's office, the second copy would be delivered to the pharmacist and the third copy transmitted to a federal depository. The doctor, of course, must bear the burden of the increased expenses and mailing of these prescriptions to the central depository. We feel that 99% of the doctors practicing good medicine are being penalized with extra administration costs and responsibilities to make up for the 1% who might be abusing the system. This will be a difficult bill to oppose because of all the emphasis on the war on drugs.

SAFETY ISSUES

1. Mandatory Seatbelt Law.

Arkansas is one of the few remaining states without a mandatory seatbelt law. Last year more than 600 persons died on Arkansas highways. At least a 1/3 of those deaths may have been prevented by proper use of seatbelt equipment. Automobile accidents are the number one killer of youth in our

nation. Although the proposal has never been passed out of the committee, its sponsors will be trying again this session.

2. Repeal of the motorcycle helmet law.

On the other side of the spectrum, there is a move by motorcycle groups to remove the requirement that Arkansas motorcycle riders must wear helmets.

3. Classification of trauma centers.

There is some discussion of a classification system for hospital emergency rooms throughout the state.

4. Regulations for all-terrain vehicles.

Every year we see more deaths and injuries as a result of all-terrain vehicle accidents, however, the legislators are not going to take on the farmers and hunters over this issue.

OTHER ISSUES

1. Mandatory Assignment.

This bill which would require that physicians accept mandatory assignment of Medicare as payment in full in order to maintain licensure will surely be back. Currently, 54% of the physicians in Arkansas accept mandatory assignment as payment in full. Eighty percent of all eligible claims are accepted as payment in full. Our message must be that physicians have always discounted fees, but on the basis of need, not on the basis of age. Mandatory assignment would create a two-tiered health system in this state.

2. Freedom of choice of health care providers.

This is basically an anti-HMO bill. It states that no insurance company, health plan or third-party payor may designate the health care provider that the patient must choose. This bill has strong support by all the other health-related organizations, but will be opposed strongly by HMO's and other organizations such as Blue Cross Blue Shield.

3. School-based health clinics/teenage pregnancies.

This legislation will try to address ways to curb the infant mortality and teenage pregnancy problem we have in Arkansas.

AMS LEGISLATIVE PROPOSALS

MALPRACTICE/LEGAL ISSUES

1. Immunity for reporting of impaired physicians.

There is a reluctance on the part of many physicians to report a fellow physician that they know or suspect may be drug or alcohol impaired. Part of this reluctance is based on the fear of later liability. This bill would grant immunity to those persons who report impaired physicians to an organized committee such as the Arkansas Medical Society Physicians' Health Committee.

2. Admissibility of collateral source benefits.

Under current Arkansas statutes, if a person involved in a lawsuit is receiving compensation for his injuries from sources such as workers compensation insurance, disability insurance, major medical insurance, etc., this can not be presented as evidence before the jury. This bill would allow those collateral sources to be introduced as evidence. In a court trial and in the case of a judgement or settlement, these collateral sources might be deducted from the total.

3. Shortened statute of limitations for wrongful birth actions.

Currently in Arkansas, if a child suffers a mental or physical defect, action may be brought against the delivering physician up until that person reaches the age of majority. Under this proposal, the statute of limitations would be reduced from 21 years of age down to 9 years of age. The theory being that any serious mental or physical defect could be detected by the time a child is 9 years old.

INSURANCE REGULATIONS

1. Third Party Payor Responsibility Act.

Many physicians spend a great deal of their time receiving permission or responding to questions from nurses or medical directors of third party payor organizations. These range from pre-admission certification to prior approval before a physician may extend a patient's hospital stay. We feel the insurance companies have confused cost containment with quality of

care. This act states that if a third party payor makes a decision affecting the health of a patient and something should go wrong, the third party payors can be held liable.

2. Notification by third party payor of beneficiary reimbursement.

To avoid the problem of patients not paying their physicians on time and the clinic going through the process of resubmitting insurance claims, when in fact, the patient has already been reimbursed, this bill requires the insurer or third party payor to notify the physician that payment has been made to the recipient.

3. Registration/regulation of Utilization Review Procedures.

This detailed act requires third party payors and other health insurance type programs to file their utilization review procedures with the Health Department.

HEALTH ISSUES

1. Criminal penalties for persons knowingly infecting others with AIDS.

This act makes it a felony to knowingly infect another person with AIDS.

2. Requires Reimbursement for rape treatment and examination.

Under previous Arkansas statutes, the hospital must be reimbursed from a state fund for the treatment and examination of a rape victim. This act is merely amended to include reimbursement for the examining physician.

AIDS IN ARKANSAS

AMS Special Committee on AIDS

William N. Jones, M.D., Chairman

Update: February 1989 Zidovudine: An Overview and Rationale for Use

*Joseph Beck, M.D.**

Introduction

The number of HIV infected Americans continues to grow and surge inward from the coasts. Between 1 and 2 million citizens have become infected, and available evidence suggests that without successful intervention the vast majority will develop AIDS within 8 to 15 years.

The number of subspecialists and interested physicians caring for these people may well become inadequate, and the AMA, ACP, and others have recommended that all primary care physicians develop the knowledge and skills necessary for treating HIV positive individuals. Zidovudine (Retrovir-Burroughs Wellcome), formerly called and better known as azidothymidine (AZT), is the only drug commercially available for the treatment of this retroviral infection, known in its terminal stages as AIDS. AZT is now the standard of care for persons with AIDS and ARC and should be prescribed whenever possible.

Before the development of AZT, no antiviral drug had been shown to affect significantly the course of an established retroviral infection in either humans or animal models, and there was widespread skepticism in the scientific community that any antiretroviral drug could affect the course of patients with established AIDS.

Discussion

AZT was first synthesized by Horowitz in 1964 as an antineoplastic agent. It was found to have limited usefulness in the available models and further development was abandoned. In 1985 Mitsuya and colleagues found it to be

effective in vitro against HIV, and later that year Phase I trials were begun.

Phase II trials were begun in 1986 at 12 U.S. medical centers and by March 1987, AZT was released by the FDA, only two years after the first laboratory observation of its effectiveness against HIV.

The rationale for utilizing antiretroviral therapy in this disease depends on several premises. First, that active replication of HIV is important in the pathogenesis of the disease; second, that most T4 helper cells are not infected at any time and that infected cells die in a short period of time, and third, that damaged organs have some capacity to regenerate. Although the above statements are generally true, we do know of important exceptions that may blunt the effectiveness of this anti-viral therapy; for example, the fact that T cells may remain latently infected until antigenically stimulated.

AZT is a nucleoside analogue in which the 3-OH group is replaced by another chemical moiety, and has been shown to inhibit HIV replication in vitro. AZT is phosphorylated to a 5 triphosphate in the target cell and in this way becomes an analogue of the naturally occurring 5 triphosphates that are the substrates for HIV DNA polymerase (reverse transcriptase) and for cellular DNA polymerases. By this mechanism, it acts as a chain terminator in growing chains of viral DNA. Reverse transcriptase selectively utilizes AZT-5 triphosphate, while DNA polymerase does not. This is thought to be the reason it exerts anti-viral actions without undue cellular toxicity.

While it is clear that T helper cells have the necessary phosphorylation activity to activate AZT, it is unknown whether all infected cell types have this capacity. It appears that EBV infected B cells and monocytoïd cells are capable

*1 St. Vincent Circle, Suite 450, Little Rock, Arkansas 72205

of phosphorylation and hence activating AZT, but the answer is unknown for other cell types.

In early 1985, the NCI, Duke University, the University of Miami, and Wellcome Research Labs began a Phase I escalating dose trial of AZT in AIDS patients. Two weeks of IV AZT was followed by four weeks of p. o. therapy at twice the IV dosage. It was found that AZT was well absorbed orally with the bioavailability of a p. o. dose being 60% and that in vitro inhibitory levels could be achieved in the blood.

The half life of AZT was determined to be one hour with hepatic glucuronidation being the main route of clearance and excellent blood-brain barrier penetration with CSF levels of 55% of plasma at three hours was documented.

In the Phase I trial, patients gained weight, T4 helper cell levels increased, fevers and superficial fungal infections decreased as did P24 (HIV core) antigen levels. There was also a suggestion that it was more difficult to culture HIV from treated patients.

Toxicity consisted of bone marrow depression, megaloblastic changes, nausea, myalgias, and headaches. This will be addressed more fully later.

In February 1986, a double blind placebo controlled trial was begun in 12 U.S. medical centers. It ultimately accrued 282 AIDS and ARC patients. By September 1986, 19 of the 20 deaths that had occurred were in the non-AZT group and the study was terminated prematurely for obvious ethical considerations.

This was highly significant at the $p < 0.0001$ level. The death rate was 6% in the AZT group, 39% in the placebo group at nine months; by one year, the death rate in the AZT group had increased to 10%. These patients are still being followed and it appears that the increase in survival has persisted. As a result of this extremely important trial, AZT was made available on a restricted basis for AIDS and ARC patients in September 1986 and was released as a regular prescription drug on March 20, 1987. This trial also confirmed earlier Phase I observations that AZT treated patients gained weight, had initially elevated T4 levels which later declined (possible as a result of drug toxicity), and had decreased P24 antigen levels. There was no difference between the two groups in the ability to culture HIV from mitogen stimulated monocytes in culture, suggesting that intracellular (presumably DNA incorporated) viral particles which were dormant were relatively unaffected.

Bone marrow toxicity remained most common and severe, and it is estimated that at the end of one year 80% of patients on AZT have had some degree of toxicity necessitating dosage interruptions or reductions. Anemia, leukopenia, and possible late decrease in the levels of T4 cells, are common and dose-related toxicities. Folate and B12 levels should be monitored and replaced aggressively since AIDS itself predisposes patients to these vitamin deficiencies and may exacerbate AZT toxicity.

AZT is now the standard of care for AIDS and ARC patients and for HIV infected patients who have fewer than 200 helper cells per cubic milliliter (normal 600 - 1200). In

addition to inhibition of retroviral reproduction, it has been shown to partially reverse HIV associated dementia and cause complete or partial regression of Kaposi's sarcoma. It is unclear whether this is due to its antineoplastic or antiviral properties, but an interesting observation is that once KS develops, HIV may not be required for its continued growth.

Usage in groups other than those noted above has not been strongly recommended to date due to lack of proved efficacy. There are 45 ongoing trials worldwide utilizing AZT in HIV infected asymptomatic persons at a variety of helper cell levels. If retroviral infection leads to depletion of T4 cells, and depletion of T4 cells predisposes to opportunistic infections and malignancies, it is logical to assume that prevention of widespread retroviral infection with AZT could halt or slow the inevitable progression of the disease as data from the recent International AIDS Conference in Stockholm suggest. In one preliminary abstract, 18 HIV infected asymptomatic men were given AZT 500 mg q 12 h. Two developed anemia while none developed leukopenia. In 6/7 untreated controls, HIV antigen levels rose, suggesting progressive viral infection and reproduction. In 17/18 treated patients, HIV antigen levels decreased, nine falling below the laboratory cutoff level. These data suggest that early antiretroviral therapy may delay or halt progression.

An additional related issue concerns nosocomial exposure of health care personnel through needle-stick accidents. It has been estimated using several large group studies that the probability of becoming infected with HIV from a significant needlestick from an HIV positive patient is approximately 1/200. Some data point to the ability of antiretroviral drug therapy to prevent early infection in animal models. Burroughs-Wellcome Company is currently sponsoring a double blind placebo controlled trial (Retrovir vs. placebo) involving individuals who have sustained such an injury. Other authorities have advocated prophylactic short course AZT for all health care professionals exposed in this way.

Summary

AZT is now the standard of care for all persons with AIDS, ARC or T4 helper cell levels less than 200/mm³. Some authorities are cautiously recommending it with full informed consent for patients who have fewer than 400/mm³ T4 cells or who have sustained a rapid fall in helper cells coupled with new symptoms. The optimum dosage remains to be determined. Although the package insert recommends 200mg p.o. q. 4 hours, b.i.d. and Q6 hour dosage regimes have been reported as being as effective with less toxicity. Folate and B12 levels should be measured and replaced when appropriate to avoid undue hematologic toxicity and therapy should be interrupted for hemoglobin less than 7.5 or neutropenia consisting of fewer than 750 leukocytes/cc. For progressive, less severe marrow toxicity the dose may be decreased to avoid a prolonged nadir. A CBC should be obtained every two weeks for at least the first eight weeks and monthly thereafter if counts are stable.

Other toxicities to be monitored include elevated transaminases and co-administration with medications that af-

fect hepatic glucoronidation such as probenecid, NSAID's and acetaminophen.

In the eight years since this epidemic appeared on the medical horizon much has been learned about the disease and its treatment. More and more physicians are willing and eager to assume primary care responsibilities for their patients with AIDS and it is hoped AZT and other effective therapies will assist them in this process.

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Avascular Necrosis of the Femoral Head

David N. Collins, M.D.* and John O. Lytle, M.D.

Introduction

Avascular necrosis of the femoral head (ANFH), known also as aseptic necrosis, osteonecrosis, adult osteochondritis dessicans or ischemic necrosis, is the end result of a circulatory disorder of bone. Mechanical and biological factors combine to produce the death of the living elements of the bone - osteocytes, hematopoietic marrow and intraosseous fat cells.

The natural history of the disorder indicates that more than 90% of the cases will result in progressive hip destruction following the structural collapse of the bone.¹ Young adults are primarily affected and may prematurely acquire advanced degenerative arthritis, for which there are few good treatment options. The goal of treatment should be preservation of the femoral head as opposed to its replacement.

With an increased awareness, identification and evaluation of the "at risk" patient, an early diagnosis can be made and the goal met, if the patient is treated surgically.

Etiology

A variety of etiologic factors which produce a disturbance in femoral head blood supply have been associated with the development of ANFH (Table I). The femoral head is richly supplied with blood carried by extraosseous and intraosseous pathways and anastomoses, providing certain areas of the head with selective and preferential nourishment (Figure 1). A mechanical disruption of the blood supply to the femoral head is a phenomenon shared by most if not all of these disorders.

The largest number of cases of ANFH arise from traumatic disorders affecting the hip. When a femoral neck

fracture occurs, the transcending vessels are disrupted to the extent which parallels the severity of the displacement of the fracture. The incidence of ANFH varies from nine to 27%, increasing for fractures which have gross displacement, occurring close to the head, or remaining in an unreduced position.² Dislocations of the hip without fracture can result in an avascular necrosis rate up to 40% and approaches 100% if the reduction is delayed up to twenty-four hours.² The serious consequence of delayed treatment have earned the dislocated hip status as a true orthopaedic emergency.

Nontraumatic conditions which are associated with ANFH can be linked to the disorder through known, though not precisely understood, mechanisms. It is postulated that the vessels become occluded by either intravascular or extravascular insults. Lipid droplets, nitrogen bubbles, and clumped red blood cells microembolize and conditions which produce thrombosis or arteritis induce diminished rates of flow.

Table I. Etiologic factors associated with ANFH.

Femoral Neck Fracture
Traumatic Hip Dislocation
Systemic Corticosteroid Administration
Systemic Lupus Erythematosus
Renal Transplant
Sickle Cell Disease
Thalassemia
Other Hemoglobinopathies and Coagulopathies
Alcohol Abuse
Caisson's Disease - Decompression Sickness
Gaucher's Disease
Solid Bone Tumors
Metastatic Tumors
Lymphoma
Post-Irradiation Necrosis
Serum Lipid Disorders
Connective Tissue Disease
Gout and Hyperuricemia
Arteriosclerosis

* Department of Orthopedic Surgery, University of Arkansas for Medical Sciences, 4301 West Markham, Slot 531, Little Rock, Arkansas 72205.

Perhaps external occlusion of the vessels occurs when biomechanical, biochemical or volume changes in the surrounding marrow elevate the intraosseous pressure, eventually exceeding the intravascular pressure to produce local circulatory collapse. Alcoholism, renal allografts, systemic lupus erythematosus, and systemic steroid administration are commonly associated with ANFH but the exact mechanism responsible for circulatory impairment is not fully known. Previously representing up to one-fourth of all cases, instances of "idiopathic ANFH" have steadily declined as the study of the condition has advanced.

Pathogenesis

Considerable uncertainty and controversy surround the concepts of the pathogenesis of ANFH. Alterations in bone and marrow element metabolism and histology can be identified soon after the vascular insult, however, the clinical and roentgenographic manifestations of the abnormal process tend to lag by months or even years.

The superolateral aspect of the femoral head is the area most susceptible to vascular insult and must also bear the maximum stress during weight bearing. These properties correlate well with observed pathologic and roentgenographic changes. Increased intraosseous pressure in the femoral head and neck has been observed but the interpretation for this phenomena is debated. Whether the process is responsible for, or the result of, the necrosis has not been established but it seems to play a role in the pathogenesis of the disorder by diminishing local circulation.

The earliest histologic change is reflected by autolysis of the cellular marrow elements, soon followed by a predictable increase in leukocytes and histiocytes. The absence of osteocytes from the lacunae, the only indication of bone death, is not often evident until two to four weeks after the vascular insult. The overlying cartilage is unaffected in the early stages as it derives its nourishment from the synovial fluid of the joint.

The inflammatory phase is soon followed by an intense response at repair with a brisk vascular invasion of the affected areas. Necrotic debris is phagocytized and removed as the accompanying primitive mesenchymal cells evolve into osteoblasts, laying down seams of new living bone upon the necrotic trabecular scaffold. These cores of necrotic bone are slowly resorbed by osteoclasts, a process termed "creeping substitution," and may proceed without interruption until full skeletal restoration has occurred, especially if the avascular segment is small. More often the process is incomplete as a result of repetitive insult from the primary cause of the avascular necrosis, calcification of the necrotic fat and hematopoietic tissue, and the formation of fibrous tissue barriers.

With resorption of the supporting necrotic trabeculae and failed attempts at repair, the structural collapse of the femoral head is inevitable, particularly in weight bearing zones.



Figure 1. Intraosseous blood supply of the femoral head. (source: Trueta J. Harrison MH. The normal vascular anatomy of the femoral head in adult man. *J Bone Joint Surg* 1953; 35B:442.

Clinical Features

Excluding those cases resulting from trauma, a general clinical picture can be developed. These patients are usually between the ages of thirty and fifty and the majority are male. The symptoms typically begin insidiously or are noted sometime following a predisposing event or insult. At first, hip pain predominates and is almost always unilateral. It is felt in the joint, anterior thigh, or knee regions. Up to 60% of cases will manifest bilateral involvement within two to three years.¹ Motion of the hip is preserved until later in the disease course when synovitis and degenerative changes are imposed upon the affected hip joint and limitations become evident.

Roentgenographic abnormalities will lag the onset of pain by three to six months, perhaps longer. This fact should alert the physician to the possibility of ANFH when patients present with hip pain and normal roentgenographs. Laboratory findings are nonspecific except as they correlate with any associated disease process.

Roentgenographic features

Anterior-posterior and "frog-leg" lateral views of the pelvis and a true lateral of the hip are the standard roentgenographic views obtained initially and are often normal because living and dead bone have the same roentgenographic appearance. It is not until the response to the avascular insult has occurred that roentgenographic changes are recognized, frequently months later. Sometimes if the pain has been significant, disuse osteoporosis may be recognized as an early roentgenographic manifestation.

The earliest sign of ANFH is increased radiodensity, often in a mottled pattern or localized to the superolateral segment. The avascular segment is isolated from circulation and cannot participate in the resorption process seen with disuse, hence a relative increased density. Contributing to

the density to an even greater extent is the laminar application of new bone upon necrotic trabeculae. Also, the calcification of necrotic tissue can add to the radiodensity of the affected regions.

With the loss of underlying support, the subchondral bone and its cartilage separate from the dead cancellous bone. This produces a subchondral radiolucency or "crescent" sign. At this stage, the sphericity of the femoral head is maintained, but with further collapse it may assume an irregular appearance. As the crushed cancellous bone impacts, greater radiodensity is observed. This wedge-shaped segment generally outlines the region of avascular bone. Scattered radiolucencies may accompany the process and represent areas of granulation or fibrous tissue.

As the weight bearing load is imposed upon the irregular cartilagenous surface, secondary changes occur in the acetabulum with progressive cartilagenous destruction, joint narrowing and the findings of degenerative arthritis.

Imaging features

Effective treatment is predicated upon an early diagnosis. When clinically suspected but not roentgenographically demonstrated, ANFH may be identified by special imaging techniques.

Subtle structural changes in the bone can be located with accuracy by tomograms in the anteroposterior and lateral planes and computer tomographic scans. In conjunction with hip arthrography, the definition of articular cartilage is enhanced and may be more carefully evaluated.

Nuclear scanning with technetium-99M diphosphonate represents an important imaging modality that can detect ANFH in its earliest stages, sometimes even prior to the onset of symptoms. Isotope uptake may either be decreased as seen in avascular segments or increased in areas of repair and remodeling. Highly sensitive, the interpretation must correlate with the clinical setting since the technique does not distinguish ANFH from other disorders.³

Magnetic resonance imaging continues to show promise as the method of choice for investigating the hip suspected of avascular necrosis. Recent studies confirm its accuracy in identifying the femoral head with avascular necrosis and estimating the extent of involvement.³

Stages of involvement

In 1973, Marcus, et al identified six clinical stages of ANFH and correlated the symptoms with roentgenographic and histologic date (Table II).⁴ These stages have since been refined and modified by others with the aim being a system of prognostication and therapeutic implication.

Diagnosis

Early accurate diagnosis prior to significant structural changes in the femoral head should be the goal in the management of ANFH. Delay implies an increased likelihood of irreversible structural alterations leading to destruction of the joint. If the appropriate imaging techniques are

utilized, ANFH can be detected before structural changes occur.

An invasive technique relying upon the detection of elevated intraosseous pressure in the proximal femoral metaphysis and head may be useful.⁵ A pressure measurement exceeding 30 mg/Hg is evidence for ANFH. By stressing the system with injected saline, waiting five minutes, and observing the return of the pressure to the baseline level, further confirmation can be obtained. Normal bone can quickly drain the excess fluid and rapidly return the pressure to normal whereas a persistently high reading is seen in ANFH. Interosseous venography can be performed showing delayed drainage of contrast material from the femoral head with avascular necrosis.

An absolute diagnosis can't be made without a microscopic examination of a biopsy specimen. With the patient anesthetized on a fracture table, fluoroscopy aids in positioning a coring device to obtain a long, cylindrical specimen from the femoral head and neck for histologic analysis to provide conclusive evidence for the disorder.

Treatment

Current treatment recommendations are based upon the stages of involvement, the age of the patient, associated disorders, significance of the symptoms, and whether the avascular necrosis is unilateral or bilateral.







Symptomatic treatment is certainly indicated in every instance following the initial diagnosis. Analgesics and protective weight bearing are the mainstays. However, no data exists to support the use of extended nonweight bearing periods to retard progression of the disorder, and it would be unusual for progression not to occur, despite nonweightbearing. There are no established medical means available to assist in the management of the disorder beyond symptomatic treatment, leaving surgical intervention as the only efficacious treatment modality.

The goal of surgical treatment, if possible, is preservation of the femoral head. By preventing collapse, articular cartilage deformation and degenerative changes of the joint may be avoided. The treatment may be designated as prophylactic if intervention is initiated in a hip without collapse or sometimes even without symptoms. It may be difficult to convince an asymptomatic patient to undergo an operation, yet in these patients, long-term preservation of the femoral head may be possible.

There are advocates of drilling the femoral head and obtaining a core decompression at the time of biopsy.⁵ This modality is based upon the concepts of restoring to normal the interosseous pressure by decompressing the interstitial areas and providing an avenue for vascular proliferation into avascular segments. Favorable results, though somewhat difficult to reproduce, have been reported for early stages of the disease.

Grafting in the form of supporting struts of autogenous fibula or tibia have been done as a method to enhance support

Table II. Stages of Involvement

Clinical Stage	Symptoms	Radiograph	Shape	Pathology	Bone Scan
I	None "Silent Hip"	Normal or scattered mottled densities in femoral head		Core biopsy reveals necrotic trabeculae with viable repair bone in areas. Ghosts of fat cells. Occasional histiocytes.	May vary from cold to diffuse increase
II	None	Rim of reactive repair bone forming wedge or "cyst" in superior, lateral & anterior quadrant		Core biopsy reveals a zone of necrotic trabeculae and marrow defined by thickened repair bone and delicate fibrous granulation.	Cold infarct zone with increased repair zone
III	Onset of groin pain	No flattening on AP but "crescent sign" seen on lateral view		The most significant changes are the pathological fracture in the subchondral bone and calcification in the marrow spaces.	Cold infarct with increasing uptake in repair zone
IV	Locking or catching & limp	Subchondral collapse seen on AP - head flattens		The marrow is densely packed with debris. The articular cartilage may be a loose flap. Hypervascularity is seen in the thickened repair zone.	Generally increased uptake
V	Continuous pain (crutches)	Further head flattening & joint erosion		The infarct repair by creeping substitution has progressed, but the articular cartilage and underlying bony architecture have deteriorated to a point of no return.	Diffuse increased uptake
VI	Restricted motion & disabling pain	Cysts, osteophytes & articular cartilage narrowing		Cysts and osteophytes are seen in place of infarct. Severe articular cartilage wear is evident.	Significant increased uptake

Modified from : Marcus, ND, Enneking WF, Massam RA. The silent hip in idiopathic aseptic necrosis: treatment by bone-grafting. J Bone Joint Surg 1973; 55A:1351-66.

beneath segments of the femoral head overlying avascular zones.⁴ Success with these methods has been varied.

Osteotomies have been designed to move the affected area of the femoral head from areas of significant acetabular contact and weight bearing.⁶ These techniques have not matched the success seen with the use of osteotomy for osteoarthritis and most surgeons are discouraged by the results.

Electrical stimulation is experimental and unresolved, although clinical trials are underway in an attempt to establish or clarify its role.⁷

Once collapse and flattening of the femoral head has occurred, attempts at preservation of the femoral head often fail. Drilling with decompression may delay the inevitable progression of symptoms and, in selected cases, this may be a worthwhile goal. However, in most instances nonoperative treatment should be employed until the symptoms warrant reconstructive surgery of the joint.

Various arthroplastic reconstructive operations are available, each involving varying and increasing degrees of sacrifice of available bone stock. Cup arthroplasty was once popular but has fallen into disfavor because of unpredictable



Figure 2. Anterior-posterior roentgenogram demonstrating Stage II femoral heads.

results. The concept of preserving the femoral head and neck led to development of surface replacement arthroplasty but initial enthusiasm has waned as high failure rates have been reported.⁸

Femoral head replacement addresses the point of primary pathology - the femoral head. By replacing only the affected part of the joint by a metal ball, either mobile or fixed, the source of pain is eliminated. However, though radiographi-

cally and grossly normal, the articular cartilage of the affected acetabulum is biologically imperfect and may not endure the altered loading imposed by the prosthetic femoral head. This surgical alternative has its advocates, but its precise role and optimal technique have not been clearly determined.⁹

Total hip replacement arthroplasty is probably the most commonly utilized reconstructive procedure for ANFH and affords predictable results. For the younger patient, however, the failure rate of conventional total hip arthroplasty is high after five years¹⁰ and should be kept in mind before offering this form of treatment. Experience with cementless total hip arthroplasty is growing and may evolve as a treatment of choice for the young patient with ANFH.

Hip arthrodesis is undesirable especially when consideration is

given to the degree of bilateral involvement of the disorder and the difficulty in obtaining arthrodesis with an avascular femoral head.

Resection arthroplasty eliminates pain and may provide a durable, mobile, yet unstable hip with a diminished functional capacity. External support and a lift are usually required. It is best applied as a salvage procedure or when circumstances preclude other types of reconstruction.

Case report

A 49-year-old black female presented for evaluation of bilateral progressive hip pain of three years duration. The pain began insidiously and interfered with activities of daily living including dressing, housekeeping, and community ambulation. No pertinent historical factors were derived. The examination of the hips revealed a restricted range of motion with pain at the extremes. Roentgenographs of the pelvis showed mottled increased radiodensities and radiolucencies within each femoral head (Figure 2). No subchondral fractures were evident. The bone scan was consistent with bilateral avascular necrosis (Figure 3) and

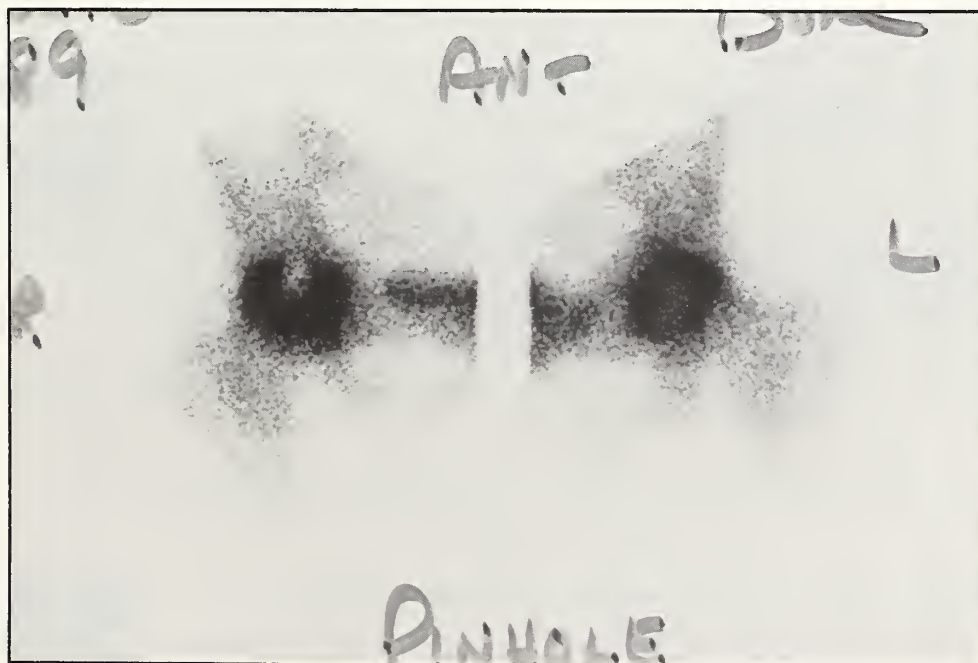


Figure 3. Technetium bone scan showing increased tracer uptake in both femoral heads.

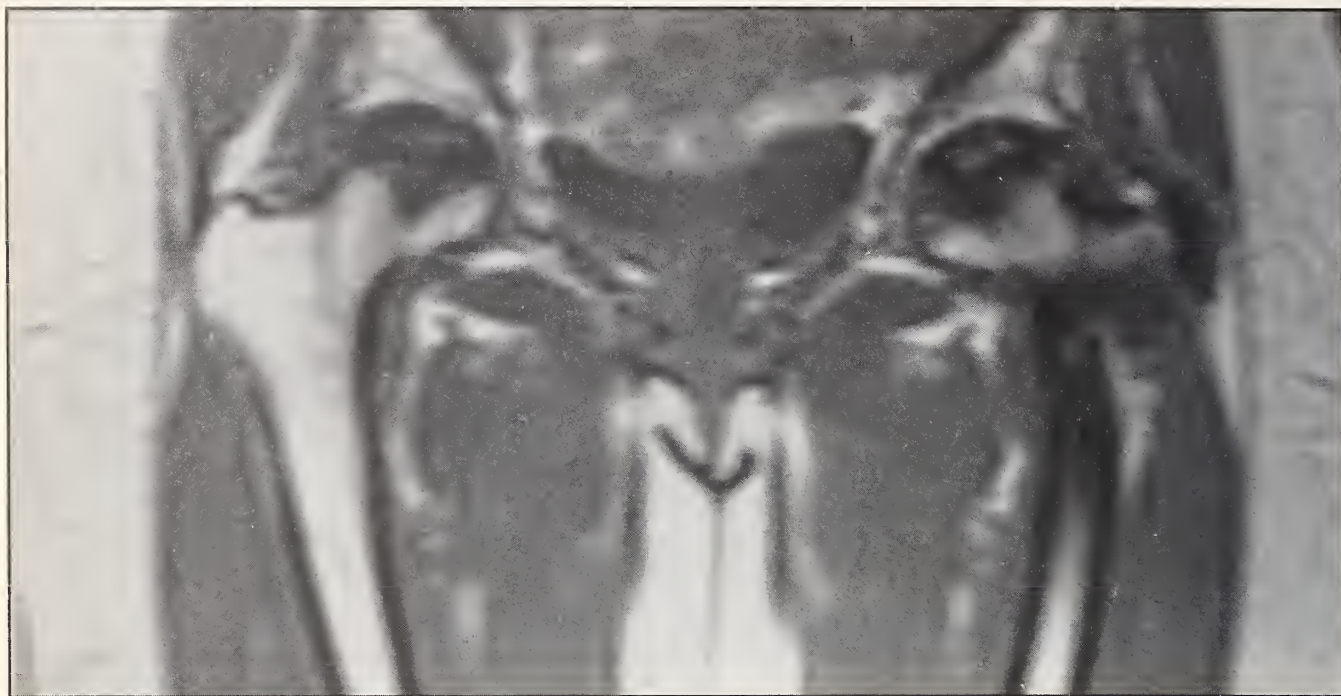


Figure 4. Magnetic Resonance Image highlights the areas of femoral head necrosis.

magnetic resonance imaging showed a signal decrease from the marrow space of both femoral heads (Figure 4).

Because of her age and an early roentgenographic stage of ANFH, the patient underwent bilateral core biopsy decompression. Intraosseous pressures were 70 mm/Hg on the right increasing to 150 mm with the stress test. An 8 mm core was removed from the femoral neck and head under fluoroscopic control. The same procedure was repeated on the opposite side with similar pressure findings consistent with avascular necrosis. She was permitted to be ambulatory with a four point gait, utilizing crutches, for eight weeks. Subsequently at an eighteen month follow-up, she has had a resolution of pain, the limp has diminished and her activity level has increased.

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ELECTROCARDIOGRAM OF THE MONTH

Gil Johnson, M.D.
John W. Watson, M.D.
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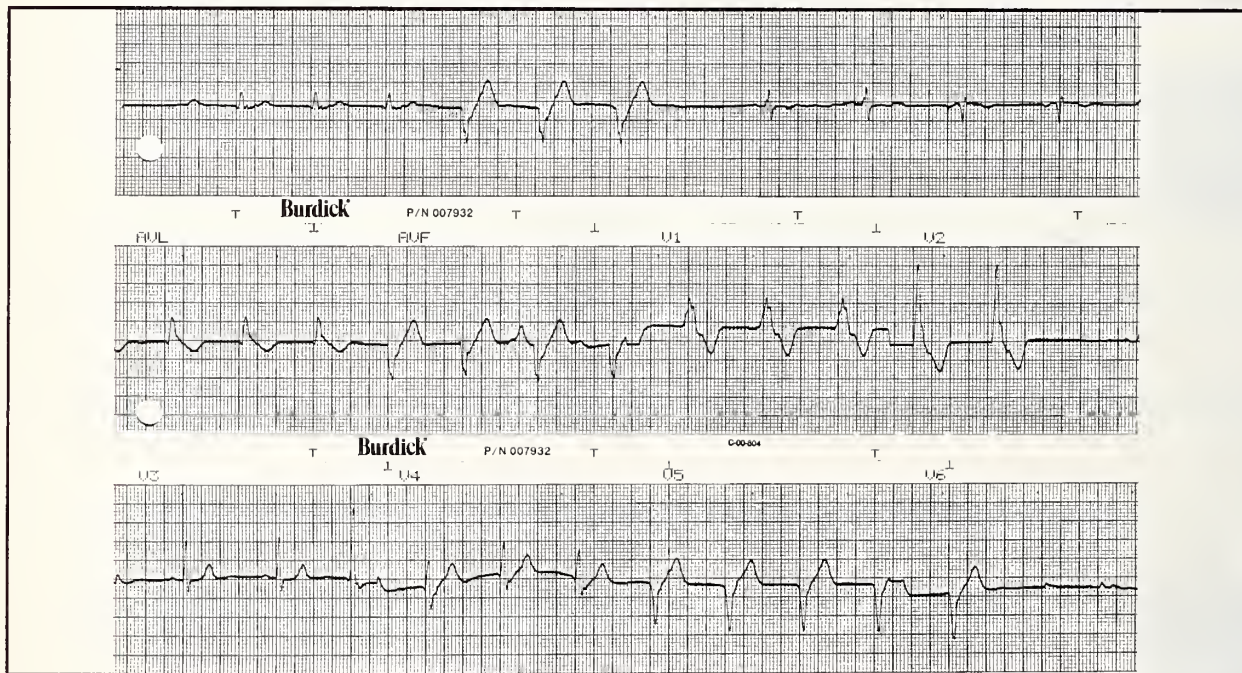
CLINICAL HISTORY:

D.C. is a 70-year-old man who presented to the hospital with pain typical of myocardial infarction. Enzymatic changes typical for infarction of the myocardium evolved over a five day period of time. The patient had this electrocardiogram on his fifth hospital day. What do you think?

DISCUSSION:

Sinus rhythm is noted at times but is interrupted by periods of wide QRS complex arrhythmia in RBBB pattern. No P-waves are noted with the beats in RBBB pattern. The rate of wide QRS beats is the same or faster than the preceding sinus rate. This pattern is compatible with AIVR (accelerated idioventricular rhythm). It is commonly seen in association with "ordinary" ventricular tachycardia.

The editor wishes to thank Dr. Johnson of Conway, Arkansas, for his contribution to this month's feature.



Alternative to Permanent Ostomy Formation

Charles H. Crocker, M.D.* and John G. Tedford, M.D.

Introduction

The purpose of this paper is to discuss an alternative to permanent ostomy formation in patients with ulcerative colitis and familial polyposis.

Case report: #1

A previously healthy 17-year-old male was admitted to St. Vincent Infirmary on June 23, 1986, with a seven week history of diarrhea and rectal bleeding. He was seen in consultation by a gastroenterologist. A flexible sigmoidoscopy with biopsies was done. The pathology report was consistent with ulcerative colitis. The patient was started on hyperalimentation and large doses of steroids. His condition continued to deteriorate and on July 20, 1986, the surgeon discussed several surgical options with the family. They decided to have an ileoanal reservoir procedure.

On July 23, 1986, the patient was taken to the operating room where he had an abdominal colectomy with a Brooke ileostomy and formation of a Hartmann pouch. Following surgery, the patient improved rapidly and was discharged from the hospital on August 2. Pathologic examination of the colon was consistent with acute ulcerative colitis.

In October, 1986, the patient was admitted to Northside Hospital, Atlanta, GA, where a mucosal proctectomy with a J-pouch anal anastomosis was performed. He also had a loop ileostomy. Ten weeks later, after a normal gastrograffin enema, he was admitted to St. Vincent Infirmary for closure of the ileostomy. He is now 13 months post ileostomy closure. He has excellent control with three to four bowel movements daily, depending on his diet. He has no night time soilage, and no night time leakage and does not wear a pad.

Case report: #2

A 17-year-old female was admitted to St. Vincent Infirmary on September 23, 1986, with a three to four day history of severe diarrhea. While in the hospital, her condition worsened, and she required a subtotal colectomy for an acute form of ulcerative colitis. The pathology report was consistent with acute ulcerative colitis. On July 24, 1987, the patient was admitted to Doctors Hospital and the authors performed a mucosal proctectomy with a J-pouch anal anastomosis and a loop ileostomy. She tolerated the procedure well and was discharged from the hospital on August 8, 1987.

On November 23, 1987, after a normal gastrograffin enema, she was admitted to St. Vincent Infirmary for closure of the ileostomy. She is now two months post ileostomy closure. She has three to four bowel movements a day with excellent control. She states that she usually has one bowel movement at night, but she does not have soilage and does not wear a pad.

Discussion

Until recently, each of these patients would have been treated by proctocolectomy and formation of a permanent ileal stoma. This procedure, described by Brooke in 1952, is a good operation which removes the diseased colon and eliminates the risk of colorectal cancer.¹ The obvious disadvantage is the permanent stoma. A variation of the Brooke ileostomy that was in vogue for a number of years was the Kock pouch (continent ileostomy). This procedure has largely been abandoned by almost all surgeons in the country because of the high failure rate after long-term follow-up.

Since ulcerative colitis and familial polyposis are diseases of the mucosa, removal of the mucosa should eliminate the cancer risk. The anastomosis of the ileum to the anus would then preserve the terminal route of defecation and avoid permanent ileostomy.

* Doctors Building, 500 South University, Suite 212, Little Rock, Arkansas 72205.

In 1933, Nissen described an anastomosis of the ileum to the anus after proctocolectomy.² In 1947, Ravitch described a technique of removal of the rectal mucosa with anastomosis of the ileum to the anus.³

Martin and colleagues reported on seventeen children with ulcerative colitis treated by mucosal proctectomy with straight ileoanal anastomosis with fair results.⁴

Despite occasional success, most patients with straight ileoanal anastomosis suffered from severe diarrhea due to the rapid delivery of fluid ileal content to the anal sphincter in the absence of a reservoir. To correct this problem, attempts have been made to form an ileal reservoir proximal to the ileoanal anastomosis.

At the present time, there are three main types of ileal reservoir. The J-pouch of Utsunomiya, the S-pouch of Park, and the lateral side to side pouch of Folkurude. Each of these has its proponent, but there does not seem to be any clear advantage of one over the other.

There are several excellent descriptions of the technique for doing this procedure, but the most important parts of the operations are as follows:^{5,6}

1. A complete bowel prep with perioperative antibiotics.
2. Careful performance of the proctectomy so that there is no injury to the nervi eigenti.
3. Careful hemostasis of the muscular sleeve after mucos-ectomy.
4. Drainage of the presacral space with Jackson-Pratt drains.
5. Performance of a diverting ileostomy proximal to the anastomosis in all patients.

Contraindications

This operation should not be done in patients with Crohn's disease, and it is contraindicated in patients with anal incontinence. Because advanced age is associated with weak anal tone, many surgeons do not recommend this operation over the age of 50. Since obese patients have a fatty mesentery, making it impossible for the pouch to reach the dentate line, marked obesity is a relative contraindication.

The operation should not be done as an emergency procedure. Patients with toxic megacolon should be treated by a subtotal colectomy with a Brooke ileostomy and either a mucous fistula or the formation of a Hartmann pouch. At a later date, the patient can be returned to the operating room for a mucosal proctectomy and pouch formation with an ileoanal anastomosis.

Complications

Although the operation is technically difficult, there have been several large series which reported no mortality. The primary complication is pelvic sepsis and cuff abscess. Williams and Johnson reported a 15 - 20% incidence of pelvic abscess.⁷ Taylor, Beart, et al, reported an incidence of 14% pelvic sepsis and 70% of these required corrective surgery with closure of the defect and/or surgical drainage.⁸

Small bowel obstruction after construction or after closure of the ileostomy is a frequent complication. Taylor, Beart, et al, reported a 25% incidence of small bowel obstruction and 10% of these required surgery to correct the problem.⁸ Williams and Johnson reported a 20% incidence of small bowel obstruction, but only 9% required another operation.⁷

The most frequent late complication after ileostomy closure was pouchitis. Becker reported a 16% incidence of pouchitis, all of which occurred in patients with ulcerative colitis and responded to oral Metronidazole.⁹ Dozois reported a 14% incidence of pouchitis.

The frequency of defecation after the procedure varies. Bodzin reported three to nine bowel movements daily with 62% of the patients requiring some type of antidiarrheal medication. He reported no incontinence of gas or stool during the day, but there was a varying degree of night-time soilage.¹⁰ All of the patients considered the present state an improvement over the preoperative urgency, diarrhea and tenesmus.

Taylor, Beart, et al reported an 84% incidence of complete continence with 13% minimal soilage, and 3% frank fecal soilage in a group of 113 patients who underwent mucosal proctectomy with J-pouch anal anastomosis.⁸ Again, 97% of the patients preferred the ileoanal anastomosis to the previous temporary diverting colostomy.

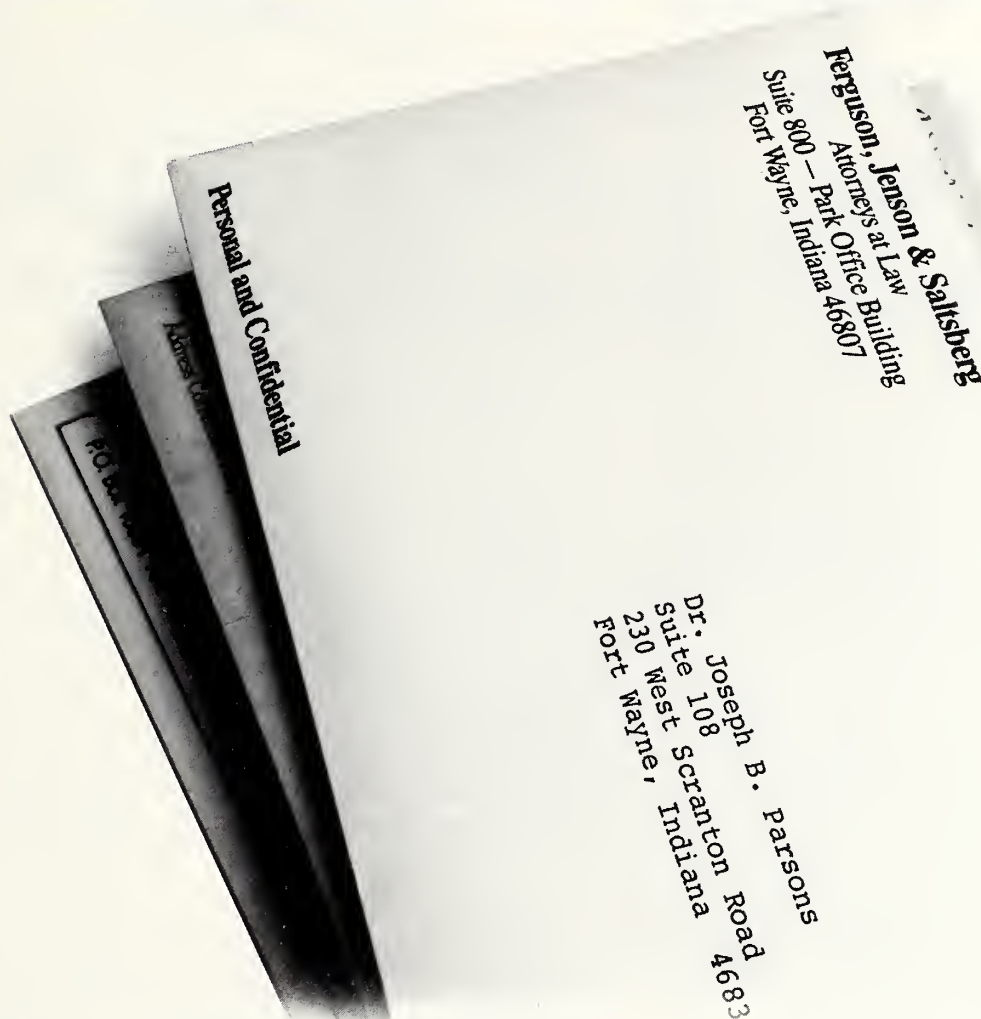
Conclusion

During the past ten years approximately 1,500 operations utilizing the mucosal proctectomy ileoanal anastomosis have been performed. Adequate experience with the procedure has shown that it is a reasonable alternative to other types of operations for ulcerative colitis and familial polyposis, and should be offered to all motivated patients requiring surgery.

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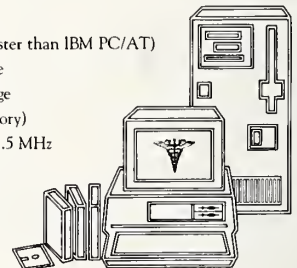
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Measles in Schools: Age at Vaccination vs Risk of Disease

Jai P. Narian M.D. and James B. Farrell, B.S.*

Abstract

In January and February 1983, ten students in three schools in Batesville, AR developed measles. The index case was in a 7-year-old unvaccinated student who had just returned from a trip to Florida. Risk of measles for inadequately immunized students (unimmunized or immunized before their first birthday) in schools was 22 times greater than for those who had been immunized on or after 12 months of age. Measles transmission occurred despite 90% of the school children having had documented evidence of adequate vaccination.

Introduction

Although live measles vaccine is expected to provide adequate immunity in 95% of the vaccinated children, effectiveness of an immunization program in actual practice depends upon many factors, including age at vaccination.^{1,2} Continuing outbreaks and indigenous transmission of measles among highly vaccinated populations indicate that persons vaccinated before 12 months of age may remain susceptible to measles infection.²⁻⁵ Thus, there is a need to identify susceptible persons, including those who received live measles vaccine before their first birthday, to consider administering measles vaccine. In 1983, an outbreak investigation in Independence County, AR, provided an opportunity to present further evidence on the risk of measles for children who had received measles vaccine before 12 months of age.

Batesville is a small town in Independence County in central Arkansas. On February 23, 1983, the school nurse at an elementary school in town contacted the State Health Department and informed them of three measles cases among

school children. Since no measles cases had been reported from that area since 1981, we began an investigation.

Methods

A case of measles was defined as a person with fever greater than 101 degrees Fahrenheit, a generalized maculopapular rash, and presence of cough, coryza or conjunctivitis. Case finding was by means of physician reports and thorough review of school records. Physicians in the area were informed of the outbreak and asked to report patients with rash illnesses. Parents of school children with measles were interviewed to obtain information on symptoms, contact with persons with rash illnesses, travel outside the local community, measles vaccination status, and past measles disease. Dates of vaccination for both case and well students were obtained from written records.

Results

During the investigation, ten clinical cases of measles were identified to have occurred between January 16 and February 23, 1983. The peak number of cases occurred in the fourth week of February. At the time of the report, the outbreak was already in the fourth generation. The index case was a seven-year-old student who, during the period of January 1 - 8, had visited Sea World and surrounding areas in Florida. This area was confirmed later to have had ongoing measles activity at the time of the child's visit. After his return to Arkansas, he developed fever, a cough and a sore throat on January 12, followed by a rash four days later which gradually became generalized. The child was hospitalized and an acute phase serum sample was drawn. Although the patient was suspected of having measles, the case was not reported to the Health Department until February 23, 1983. The child had never been immunized against measles although he had attended three different schools during the past year. Testing of serum samples from the child at the

Caribbean Epidemiology Center, Post Office Box 164, Porta Spain, Trinidad.

Table I. Measles Cases by Vaccination Status, Independence County, Arkansas, 1983.

Vaccination Status	Total students	Number ill	Attack rate (%)
Unvaccinated	3	1	33
Vaccinated at <12 months of age	143	6	4
Vaccinated at >12 months of age	1,376	3	0.2
Total	1,522	10	0.7

Editor's Note: According to the Arkansas Department of Health, the number of cases of measles in Arkansas since 1983 were: 8 cases in 1984; 0 in 1985; 283 in 1986 (mostly in northwest Arkansas in Washington, Johnson & Stone counties); 0 in 1987 and one possible case in 1988. Currently immunization recommendations include that measles-mumps-rubella vaccination be given at 15 months.

Arkansas Department of Health showed a four-fold rise in complement fixation measles antibody titers.

All measles cases except one were in children attending one of three schools (East, West, and Intermediate) in Batesville. Four cases each occurred in East and Intermediate schools, while two were reported from West School. All cases occurring in schools were from two grades: six from second grade and the remaining four from fifth grade. The patients were all between the ages of 7-11 years (median = 7.5). Seven of the cases were in girls and three were in boys. No cases were reported from the two other schools in the area (a high school and college) in spite of aggressive case-finding efforts.

Only one of the ten students with measles had not received the measles vaccine. Of the remaining nine patients, six had received live measles virus vaccine before 12 (but after 11) months of age, while three had been vaccinated with live vaccine on or after their first birthday. None of the patients gave a history of having had measles disease in the past.

Record review of all 1,522 students in the three schools revealed that 146 had inadequate evidence of measles vaccination (three were unvaccinated and 143 vaccinated before 12 months of age) [Table I.] while 1,376 were vaccinated on or after 12 months. Seven cases developed in the inadequately vaccinated group (unvaccinated plus vaccinated before 12 months for an attack rate of 4.8%, compared to three in the vaccinated after 12 months group [attack rate 0.2%, p less than 0.0001]). The risk of measles was 22-fold for inadequately vaccinated students.

Children who were unvaccinated, vaccinated before their first birthday, and those who lacked specific date of prior vaccination were excluded from attending school until they showed a documentation of proper immunization. On February 26, 1983, an immunization clinic was held in the Health Department where students with inadequate vaccination histories were vaccinated with measles-rubella (MR)

vaccine. More than 300 students were vaccinated in subsequent clinics. Since February 23, until the end of 1983, no new case were reported from Independence County or other areas of Arkansas.

Discussion

Although measles incidence in the United States has declined dramatically since the licensure of measles vaccine, cases still occur following importation of measles virus either from foreign countries or from states experiencing measles outbreaks. The epidemiological evidence suggest that this outbreak occurred after the index case visited an area in Florida in which measles was present.

This outbreak, which occurred in schools where 90% of the population had been vaccinated, shows that those who were vaccinated before their first birthday are not protected against measles. Risk of developing measles on exposure for those vaccinated before 12 months is as high as 19 times, compared to the children vaccinated at or after 12 months of age. Efficacy of vaccine administered before 12 months of age is generally lower because of host factors, such as maternal antibodies persisting in the post-neonatal period and thereby interfering with immunogenicity of the vaccine.⁸ Such children need to be revaccinated, as transmission among them may occur once measles is introduced in such a population.

To make a diagnosis of measles, a high index of clinical suspicion is required. Because measles has become uncommon, many physicians may not have seen a case. However, this outbreak suggests the possibility that physicians may still see a case. Although the index case in the outbreak was clinically suspected to have measles, he was not reported until late in the outbreak. Had this patient been reported when he was hospitalized, seven (70%) of the ten cases could have been prevented. Physicians should suspect the diagnosis of measles in a patient with febrile rash illness and report such cases to the Health Department. They should also

attempt to obtain appropriate serum samples which can confirm the diagnosis serologically.

Control of measles outbreaks in schools and colleges involve prompt identification of persons susceptible to measles and administration of measles vaccine.^{6,7} Although documentation of measles vaccination is required at school entry, many children might have received their vaccination before 12 months of age. More than 9% of students in these schools had evidence of inadequate vaccination. Prevention of similar outbreaks in schools may need identification of such children and revaccination with measles vaccine.

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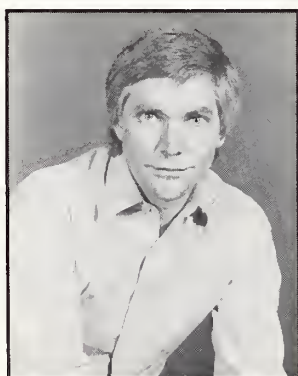
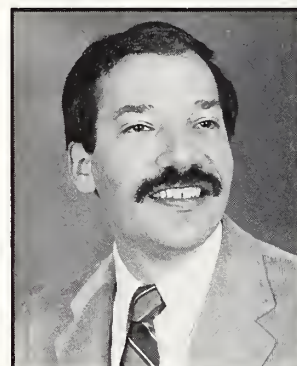
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March 21, 7:00 p.m. Presented by Mark A. Levinson, M.D. Sponsored by Baxter County Regional Hospital CME Program. Education Building, Baxter County Regional Hospital, Mountain Home. Two Category I credit hours. Further information: Chuck Riley, R.N., CME Coordinator, 624 Hospital Drive, Mountain Home, AR 72653; (501) 425-1446.

Nitrates & Angina

March 22, 12:00 noon. Presented by Frank McGrew, M.D. Sponsored by AHEC - Fort Smith. Fourth Floor Conference Room, Sparks Regional Medical Center. One Category I credit hour.

Infectious Disease Update

March 27-28, 7:30 a.m. - 12:00 noon each day. Presented by Richard Jacobs, M.D., Terry Yamauchi, M.D., and Russell Steele, M.D. Co-sponsored by Arkansas Children's Hospital Continuing Education Program and UAMS Continuing Education for Physicians. Sheraton Hot Springs, Lakeshore Resort. Eight Category I credit hours. Fee: \$80. Further information: Blanche Moore, Director of Continuing Education, ACH, 800 Marshall, Little Rock, Arkansas 72202-3591.

Tumor Conference

March 28, 12:00 noon. Presented by Randal Bowlin, M.D. Sponsored by AHEC - Fort Smith. Fourth Floor Conference Room, Sparks Regional Medical Center. One Category I credit hour.

Medical Office Management

April 1, 8:00 a.m. - 4:00 p.m. Sponsored by the Pulaski County Chapter of Medical Assistants. St. Vincent's Infirmary - South Auditorium, .6 CEU's available. Fee: Member, \$79; non-member, \$99. Further information: Margie Litton, CMA, North Pulaski Women's Clinic, 1224 Braden, Jacksonville, AR 72076; 982-3461.

Internal Medicine

April 11, 12:30 p.m. Presented by L. C. Price, M.D.
Sponsored by AHEC - Fort Smith. Medical Library,
Sparks Regional Medical Center. One Category I credit
hour.

OB Lecture Series

April 12, 1:00 - 2:00 p.m. Presented by William
Harrison, M.D. Sponsored by AHEC - Northwest. 241
West Spring, Fayetteville. One Category I credit hour.

Pediatric Cardiology

April 19, 12:00 noon. Presented by the staff of
Arkansas Children's Hospital. Sponsored by AHEC - Fort
Smith. Seventh Floor Dining Room, Sparks Regional
Medical Center. One Category I credit hour.

Emergency Medicine Update

May 4-5. Sponsored by Baptist Medical Center.
Further information: Baptist Medical Center Medical
Education, 227-2672.

Recurring Education Programs

As organizations accredited for continuing medical education by the Arkansas Medical Society, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), each Friday, 12:15 p.m., Conference Room, Building 1, VAMC
Mortality/Morbidity Conference, fourth Wednesday, 2:45 p.m., Conference Room, Building 1, VAMC

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon, varying topics, alternating Fridays, 12:30 p.m., Classrooms, AMI National Park Medical Center

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Second Floor Classroom
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Sturgis Building, Rooms S120-121
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium. A meal is provided.
Cancer Conference, third and fourth Thursday, 12:00 noon, Southwestern Bell Room A meal is provided.
General Medicine Journal Club, each Tuesday, 12:00 noon, Conference Room 1. A meal is provided.
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library. A meal is provided.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Arkla Room. Refreshments are provided.
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory. Refreshments are provided.
Pediatric Conference, first Tuesday, 12:30 p.m., Vincent de Paul Room. A meal is provided.
Peripheral Vascular Disease Conference, fourth Tuesday, 6:00 p.m., Arkla Room. A meal is provided.
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, Southwestern Bell/Arkla Rooms. A meal is provided.

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and case presentations. A light lunch is provided.
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library
Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium. A light lunch is provided.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES - LITTLE ROCK

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137

Anesthesia Conference Series, times and dates vary, UAMS Education Building, Room G/110 A&B
Anesthesia Morbidity and Mortality Conference, every second and fourth Tuesday, 6:45 a.m., UAMS Education Building, Room G/110 A&B. Every first, second and third Thursday, 4:00 p.m., Room G/112 A&B.
Child Psychiatry Clinical Case Conference, first Friday, 1:00 p.m., UAMS Child Study Center Conference Room.
Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium
Medicine Research Conference, each Wednesday, 4:30 p.m. Shorey Building, Room 3506
Neurology Clinical Case Conference, three or four Thursdays per month, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.
Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (7D33) and LRVAMC (Autopsy Room).
Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7D33.
Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.
Orthopaedic Basic Science Conference, occasional Tuesdays, 11:00 a.m., UAMS Education Bldg., Room B/135.
Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds/Clinical Case Conference, each Friday, 11:00 a.m., UAMS Shorey Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building, Room 159
Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Morbidity and Mortality Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A.
Surgery Resident Case Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A
Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS
Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC
Urology Morbidity and Mortality Conference, last Wednesday, 5:00 p.m., UAMS
Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS
VA Diagnostic Imaging Conference, every Tuesday, Wednesday and Thursday, 8:00 a.m., LRVA Nuclear Medicine Conference Room, Room 1D173
VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., NLRVA, Building 66, Room 38
VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., NLRVA Building 89, Conference Room, or Arkansas Rehab Institute
VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109
VA Surgery Service General Chest Topics (Combined Surgery/Medicine Lung Conference), every other Monday, 12:15 p.m., LRVA, Room 2D109.
VA Surgery Service Lung Cancer Conference, every Tuesday, 3:00 p.m., LRVA, Room 2E142.
VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L
VA Weekly Tumor Conference, each Tuesday, 1:00 p.m., VAMC, Room 2D109

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pediatric Conference, third Friday, 12:15 p.m., Union Medical Center.
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

Cardiology Lecture Series, first Monday, 1:00 p.m., Washington Regional Medical Center
City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital
Family Medicine Conference, varying dates through February, March and April, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville. Contact AHEC - NW for list of dates.
Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, every four months, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, MO
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pochontas
Neurological-Neurosurgical Conference, first Monday, 12:00 noon, St. Bernard's Dietary Conference Room
Neuroradiology Conference, second Friday, 12:00 noon, St. Bernard's Dietary Conference Room
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.

Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room

PINE BLUFF-AHEC

Behavioral Science Conference, first and third Thursday, 12:00 noon, Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, first and fourth Tuesday, 12:00 noon, Jefferson Regional Medical Center
Geriatrics Conference, third Friday, 12:00 noon, Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:00 noon, Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, second and fourth Thursday, 12:00 noon, Jefferson Regional Medical Center.
Pediatric Conference, third Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, fourth Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Surgery Conference, first Friday, 12:00 noon, Jefferson Regional Medical Center
Tumor Conference, first Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC

Cardiology Conference, alternating Fridays, 11:30 a.m., St. Michael Hospital
Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital.
Cine Radiology, second Friday, 12:00 noon, Wadley Regional Medical Center.
Echo-Cardiology, fourth Friday, 12:00 noon, Wadley Regional Medical Center
Internal Medicine Conference, second Tuesday, 12:00 noon, St. Michael Hospital
Neuro-Radiology Conference, second and fourth Wednesday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Surgeons Pathology Conference, varying dates, 7:00 a.m. breakfast, Wadley Regional Medical Center
AHEC Tumor Conference, first Wednesday, 7:00 a.m. breakfast, St. Michael Hospital

MEDICINE IN THE NEWS

HCFA MAKES MAJOR CONCESSIONS

Faced with the absolute certainty that it would once again be hauled into court by the AMA to defend increasingly burdensome and inequitable Medicare carrier review policies, HCFA has acquiesced to AMA demands by entering into a seven-point agreement to rectify the situation.

In a letter from William L. Roper, M.D., HCFA Administrator, to James H. Sammons, M.D., AMA's Executive Vice President, the terms of the AMA-HCFA agreement include HCFA's firm commitment to continue and improve the claims development policy it embarked upon April 1, 1988, at AMA's insistence. It also will direct Medicare carriers to give state medical associations and specialty societies an essential voice on any changes being considered in medical coverage policies and to immediately provide them and others with all existing medical coverage policies.

The agreement makes major concessions which will directly involve medical societies in the carrier policy-making process on medical coverage. This represents an important first. Here are some of the aspects of such participation and involvement that are covered by the agreement:

- HCFA has developed a proposed rule that will require each carrier to invite comment from state medical

associations or appropriate specialty societies on any change in any medical coverage policy of that carrier. No changes could be made in such policy until medical society comments were considered and until 30 days after policy changes were published. Carriers would be required to contact medical societies to discuss prospective changes and the rationale for them.

- In both the proposed rule and interim instruction, HCFA will direct each carrier to seek input from medical societies on specific parameters that might be used in implementing new coverage policy at the carrier level.

- Each Medicare carrier will be directed to promptly investigate reports by AMA regarding non-compliance with claims development instruction for other aspects of the Medicare review program by specific carriers.

In return for the HCFA commitment mandating corrective action to obviate the massive professional and patient problems that have occurred because of the way medical necessity provisions were being applied by carriers, AMA has agreed to postpone the filing of its previously threatened lawsuit for six months while the impact of the new policy is assessed.

Reaching the agreement concluded nearly two months of intensive AMA-HCFA negotiations to remedy medical necessity program shortcomings and to avert the immedi-

ate need for the AMA to bring suit to seek judicial relief. Prior to that AMA and HCFA staff had been meeting regularly since last January in attempts to resolve the many problems that enforcement had thrust upon physicians and payments.

Although the agreement won't resolve all the physician problems stemming from the medical necessity refund requirement, it is expected to "substantially improve" the situation, Kirk Johnson, AMA's General Counsel, said. Physician complaints about the way that requirement was being handled dropped off considerably after carriers were directed to develop claims, he noted. Thus, the new agreement is "very important" because government is promising not just to retain the program, but to insist that carriers implement it "fully and fairly," he said.

HCFA immediately will send a letter to all Medicare carriers stating the importance of developing claims for medical necessity and advising that this activity is to continue indefinitely. This communication will specify the steps that are required by claims development. It also will direct that the initial development letter from the carrier to the physician not be negative or accusatory in tone, but indicate only that further information is needed to process the claims.

WALKING DOCTORS DIRECTORY: CALLING ALL ARKANSAS DOCTORS

Gary Yanker, "America's Foremost Authority on Walking" (USA Today, New York Times, American Health and NBC) joins the editors of *Walking World* to assemble the first directory listing doctors and health professionals from all medical fields, including cardiology, nutrition, exercise physiology and training, physical therapy, orthopedics, psychology, rheumatology (arthritis), geriatrics, and podiatry who walk and prescribe walking to their patients as a preventative, rehabilitative, and therapeutic exercise.

"Our goal is to provide walkers from across the United States with a network of doctors and health professionals who are sympathetic to walkers' needs because they are themselves walkers," said Yanker.

Interested medical doctors, exercise therapists, research scientists, and other health professionals who walk as their primary exercise and who recommend walking to their clients can apply to be listed in the new *Walking Doctors Directory*, to be published by McGraw-Hill in 1990. There is no obligation to be listed in the directory. Just send your resume or curriculum vitae to : *Walking Doctors Directory*, c/o *Walking World*, P. O. Box K, Gracie Station, New York, NY 10028 or call (212) 879-5794 and leave your name, address and telephone number. Please indicate at the top of your resume how many miles you walk per week, as well as your telephone number and address.

Health professionals interested in learning about exercisewalking techniques and walking programs can get

a free nationwide list of walking clinics, as well as additional information on starting a group or corporate walking programs by sending a self-addressed, stamped envelope to : *Walking World Corporate Clinics*, P. O. Box 509, Gracie Station, New York, NY 10028. Please include a cover letter on your organization (including address and telephone number).

COMPACT LIBRARY: AIDS

Compact Library: AIDS, a comprehensive medical library of AIDS literature on CD-ROM, is now available from The Medical Publishing Group of the Massachusetts Medical Society. This unique, innovative product provides the full text of original journal articles, textbook and bibliographic data on all aspects of AIDS, fully linked and integrated into one up-to-date source of information. Designed for use by all health professionals, hospital administrators, medical librarians and educators, **Compact Library: AIDS** meets the needs of persons requiring immediate, accurate AIDS information.

Compact Library: AIDS will be sold on an annual subscription basis, providing unlimited access at a fixed cost. Subscribers will automatically receive a new, updated disc every three months, ensuring the currency and timeliness of this electronic AIDS library. **Compact Library: AIDS** works with most IBM personal computers and compatibles.

The primary information source on the AIDS disc is the AIDS Knowledge Base from the San Francisco General Hospital. This electronic textbook is written and updates by leading AIDS specialists and contains current information on epidemiology and transmission, testing, ARC, pediatric AIDS, education, prevention, and policy and ethical issues. An online version of the AIDS Knowledge Base is available through BRS/Colleague, the leading online medical service. A print version is planned for later this year from The Medical Publishing Group. An additional source of information for the library includes a subset of the MEDLINE database with bibliographic references and abstracts of articles relating to AIDS from some 3200 biomedical journals published worldwide. Also included is the full text of articles about AIDS from leading medical journals including *Annals of Internal Medicine*, *British Medical Journal*, *Lancet*, *Morbidity and Mortality Weekly Report (MMWR)*, *Nature*, *Science*, and *The New England Journal of Medicine*.

If you would like more information about **Compact Library: AIDS**, contact Mr. Bart Rubenstein, The Medical Publishing Group, 1440 Main Street, Waltham, MA 02154; (617) 893-3800.

WHEELS ACROSS AMERICA

The state of Arkansas has recently been chosen as a sponsor for part of the *Wheels Across America* campaign.

This event will feature wheelchair athlete Bill Duff whose goal is to wheel 5,000 continuous miles across America to increase awareness and raise funds for the Miami Project to Cure Paralysis. Duff, a 26-year-old from Austin, Texas, has been a paraplegic since 1982.

The Miami Project is a coalition of 54 scientists and researchers who have committed themselves to the goal of curing paralysis and raising international awareness about spinal cord injury victims.

Duff will be wheeling through Arkansas from April 8 - 22, 1989. The Miami Project is looking for local "activists" who would be interested in working with the citizens of their communities to welcome him and organize fund-raising events for the Miami Project. Governor Bill Clinton has already accepted the position of Honorary Chairman and Carol Davis, Public Relations Director for Kirkpatrick and Associates, has accepted the position as state coordinator. All those interested in volunteering their time to this event may contact Carol Davis, 111 Center Street, #1616, Little Rock, AR or Christine Munro, 236 Central Avenue, #1400, Hot Springs, AR 71901. A map and city listing which shows the route Bill Duff will be taking through Arkansas is available through them.

SHRINERS HOSPITALS FOR CRIPPLED CHILDREN

The St. Louis Unit of Shriners Hospitals for Crippled Children is one of 19 orthopaedic and three burn institutes that make up the 22 Shriners Hospitals for Cripple Children network.

Since the time the first Shriners Hospital opened in 1922, Shriners Hospitals for Crippled Children have been providing expert medical care free-of-charge to children; newborn to 18 years of age, regardless of race, religion or their relationship to a Shriner. Admission is based on medical appropriateness and financial need, by submission of an application to the hospital.

The St. Louis Unit treats patients from a nine state area, including Arkansas. Some of the orthopaedic problems treated at the St. Louis Unit of Shriners Hospitals for Crippled Children are limb deficiencies, Legg-Perthes disease, leg length discrepancies, club foot and other deformities of the feet, neuromuscular disorders, and orthopaedic problems related to spina bifida and cerebral palsy. Other disorders treated include scoliosis, vitamin D resistant rickets, hand and hip deformities, and osteogenesis imperfecta.

The St. Louis Unit of Shriners Hospitals for Crippled Children has the distinction of being the largest and one of the busiest in the system. The 80-bed hospital has an active patient list of approximately 9,200 and the Outpatient Clinic Department sees approximately 250 patients per week.

Another distinguishing characteristic of the St. Louis Unit is its Metabolic Research Unit. The facility was established to help diagnose, treat and study potential therapies for children with a variety of metabolic bone disease such as osteogenesis imperfecta (brittle bone disease), vitamin D resistant rickets and hypophosphatasia.

The MRU's team approach to health care provides patients and their families with the physical resources and emotional support necessary to cope with the challenges of chronic illness. Dr. Michael P. Whyte, MRU Medical Director, has developed a reliable test to identify carriers of hypophosphatasia, a rare and potentially fatal disease in the infantile form. Dr. Whyte and his colleagues continue to search for possible treatments of this and other rare, crippling bone diseases.

If you know a child with an orthopaedic handicap or metabolic bone disease who, due to their financial situation may otherwise not receive the help they need, an application for admission may be obtained by calling 1-800-237-5055 or 1-(314)-432-3600, extension 119.

- *Ruth A. Lavery*

Public Relations Coordinator

AMS NewsMAKERS

Wilma C. Diner, M.D., Director of the Radiology Residency Training Program at UAMS and chief of the Radiology GI Section at The University Hospital of Arkansas, was chosen to receive the distinguished "Marie Curie Award" from the American Association of Women Radiologists. Dr. Diner, a charter member of AAWR, is the third recipient of the award in the 1,000 member association's 12-year history. She received the award at the luncheon meeting of AAWR, held in conjunction with the annual meeting of the Radiologic Society of North America in Chicago.

The national honor came as a great surprise to the unassuming and professional Dr. Diner. "I was completely overwhelmed and really surprised," she commented. "I am pleased to be honored by an organization that plays such an important role in the careers of many women in radiology."

Dr. Diner is a respected authority on mammography, one of her two radiologic specialties, the other being gastrointestinal radiology. She admits that her involvement in mammography began, in part, because "no one else was interested in doing it." She credits much of her

interest and initial training in mammography to Joseph Calhoun, M.D., of Little Rock, the first radiologist in Arkansas to perform mammography and an honored member of the American College of Radiology.

David Brown, M.D., a Fayetteville neurologist, was recently chosen to be one of twenty-five physicians nationally to attend a week-long fellowship program in the treatment of epilepsy at the Bowman Gray School of Medicine. The program was held at Wake Forest University.

Ernest J. Ferris, M.D., professor and chairman of Radiology at UAMS, has been elected to the directors board of the Radiologic Society of North America.

E. Clinton Texter, Jr., M.D., Jerome S. Levy Professor of medicine (Gastroenterology) and professor of Physiology and Biophysics at UAMS, recently presented the "16th Annual Levy Lecture" at the University of Arkansas for Medical Sciences. Dr. Texter's subject was "Clinical Features, Pathophysiology, Natural History, and Rational Treatment of Peptic Ulcer."

Baptist Medical Center medical staff has elected their new officers for 1989-90. They are **F. Anthony Bennett**, cardiology; **Marvin Leibovich**, emergency medicine; **B.**

Richard Johnson, Pathology; **Susan Keathley**, pediatrics; **R. Barry Sorrells**, chief of staff; and **James S. Adamson**, vice chief of staff.

The 1988-89 medical student recipients of the Buchanan Key are **Anthony Russell**, **Andrew Levy** and **Steven Coker**. The Buchanan Keys are presented each year in honor of the later A. S. Buchanan, who established the award in 1939.

James Kolb, M.D. and **Robert May, M.D.** were trained recently in advance techniques of operative arthroscopy at a week-long meeting in Los Angeles. The meeting was sponsored by the University of California, Los Angeles and the School of Medicine at UCLA. Both doctors practice orthopaedic surgery in Russellville. **Dr. Kolb** was also recently appointed co-chairman for the state of Arkansas in the fund-raising campaign for the Orthopaedic Research and Education Foundation.

One of the new fellows of the American College of Surgeons is **John Alston, M.D.** Dr. Alston is a surgeon in Springdale.

Sam McGuire, M.D., a family practitioner from Forrest City, was elected vice chief of staff at the Baptist Memorial Hospital of Forrest City.

NEW MEMBERS

CRAIGHEAD-POINSETT MEDICAL SOCIETY

Levinson, Mark A., Cardiology/Internal Medicine, Jonesboro. Born January 23, 1952, St. Louis, MO. Pre-medical education, University of Missouri, Columbia, B.A., 1973. Medical education, Washington University School of Medicine, 1978. Internship/residency, Jewish Hospital of St. Louis. Practice experience, 5 years, St. Charles, MO. Teaching appointments, Clinical Instructor, Medicine, Washington University. Board certified, Internal Medicine/Cardiology. Member, AMA, ACC, ACCP, AHA.

Owens, Jr., Ben E., Internal Medicine, Jonesboro. Born June 20, 1958, Batesville, AR. Pre-medical education, Arkansas State University, B.S., 1980. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/residency, University of Tennessee. Practice experience, 1 year, Jonesboro. Member, American College of Physicians.

Silas, Sr., David J., Addictionology, Jonesboro. Born January 6, 1942, Crowley, LA. Pre-medical education,

University of Southwestern Louisiana, B.S., 1964. Medical education, Louisiana State University, New Orleans, 1969. Internship, Confederate Memorial Medical Center, Shreveport. Practice experience, 1970-73, Winnfield, LA; 1073-81, Rayville, LA; 1982-84, Chattanooga, TN; 1984 to present, Greenleaf Hospitals, Ft. Oglethorpe GA, and Jonesboro, AR.

Stevenson, Daniel R., Cardiovascular & Thoracic Surgery, Jonesboro. Born December 15, 1950, Jonesboro, AR. Pre-medical education, Arkansas State University, B.S., 1972. Medical education, University of Arkansas for Medical Sciences, 1976. Internship/residency, UAMS. Practice experience, 6+ years, Shreveport; 4 months, Jonesboro. Teaching appointments, Asst. Professor, Surgery, LSU; Director of Cardiac Surgery Services, LSU; Clinical Faculty, Dept. of Surgery, LSU. Board certified, Surgery, Thoracic Surgery. Fellow, ACC, ACCP, ACS.

Stewart, Mark L., Dermatology/Pediatrics, Jonesboro. Born November 18, 1949, Riverside, CA. Pre-medical education, Texas Tech University, B.S., Zoology. Medical education, University of Alabama, Birmingham, 1975.

Internship/residency, David Grant USAF Travis AFB, CA. Residency, University of New Mexico, Albuquerque. Practice experience, 1972-75, David Grant USAF Medical Center, Travis AFB; 1978-81, Zweibrücken AB, Germany; 1981-84, Kirkland AFB, Albuquerque; 1984-86, University of New Mexico; 1987-88, Las Vegas. Board certified, Pediatrics and Dermatology.

MISSISSIPPI COUNTY MEDICAL SOCIETY

Johnson, Jonathan H., Pathology, Blytheville. Born February 16, 1957, Cape Girardeau, MD. Pre-medical education, University of Missouri, Columbia, B.A., 1979. Medical education, Eastern Virginia Medical School, Norfolk, VA, 1984. Residency, Baptist Memorial Hospital, Memphis, TN. Member, CAP, AMA.

WASHINGTON COUNTY MEDICAL SOCIETY

Rudko, Michael., General and Thoracic Surgery, Fayetteville. Born July 3, 1930, Argentina. Pre-medical education, Randolph-Macon College, Ashland, VA, B.S., 1956. Medical education, University of Texas Southwestern Medical School, Dallas, 1960. Internship, Ohio State University Hospitals, 1961. Residency, University of Oklahoma Medical Center and University of Arkansas Medical Centers, 1969. Military record, USAF, Capt. Chief/Aerospace Medicine, Tinker AFB, Oklahoma.

Practice experience, 1971 to present, Fayetteville, AR. Teaching appointments, Assistant Clinical Professor, Surgery, UAMS. Board certified. Member, ACS, SA VS.

RESIDENT PHYSICIAN SECTION

Hickerson, Steven, P., Medicine/Pediatrics. Born August 15, 1960, Lubbock, TX. Pre-medical education, Texas Tech University Health Sciences Center, Lubbock, 1988. Internship, UAMS.

Lyle, Robert E., Pediatrics. Born January 23, 1959, Longview, TX. Pre-medical education, Texas Christian University, Fort Worth, TX, B.S., 1982. Medical school, University of Texas Medical School, San Antonio, 1986.

Rhodes, Joseph, B., Family Practice. Born September 2, 1960, Osceola, AR. Pre-medical education, Baylor University, Waco, B.S., 1982. Medical education, University of Arkansas for Medical Sciences. Internship, John Peter Smith Hospital, Fort Worth TX. Internship/residency, UAMS.

Stark, James E. Born August 4, 1962, Tuscaloosa, AL. Pre-medical education, University of South Alabama, Mobile, B.S., 1984. Medical education, University of South Alabama, 1988. Internship, University of Arkansas for Medical Sciences.

Tippin, Kim G. Born January 31, 1959, Russellville, AR. Premedical education, Arkansas Tech University, Russellville, B.S., 1981. Medical school, University of Arkansas for Medical Sciences, 1985. Internship, UAMS.

TAKE THE FIRST STEP TO RECOVERY

The Physicians' Health Committee exists for you - the physician who is struggling with drug or alcohol addiction. The committee is composed primarily of physicians who have "been there" and want only to help their colleagues avoid making the same mistakes.

The Committee members are willing to set up interventions, recommend treatment, and help with aftercare and re-entry.

The Committee is not involved in any legal, moral or punitive judgements.

ON CALL FOR YOU

Don't throw away your profession because of drugs and alcohol. Contact our Physicians Confidential Assistance Hotline at (510) 370-8221; only specially trained personnel will return your call. Or call the Arkansas Medical Society office at (501) 224-8967 or 1 (800) 542-1058. Ask for the name of one of the Physicians' Health Committee members.

All inquiries are confidential within the Committee and no names or locations are necessary when contacting the Society office.

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113th Annual Meeting of the Arkansas Medical Society



FOCUS ON THE FUTURE

April 27 - 29, 1989
Arlington Hotel and Exhibit Center
Hot Springs National Park, Arkansas

Focus on the Future

113th Annual Meeting of the Arkansas Medical Society

April 27 - 29, 1989

Arlington Hotel and Exhibit Center

Hot Springs, Arkansas

Featuring



William M. McDermott, M.D.

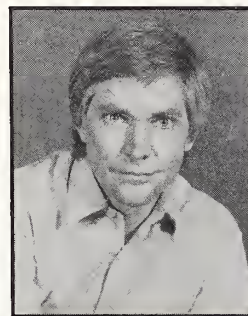
Executive Vice President

Massachusetts Medical Society

"The Massachusetts Universal Health Care Plan:

Is It a National Trend?"

Friday, April 28, 9:30 a.m.



Peter W. Huber, J.D., Ph.D.

Author, *Liability, the Legal Revolution and its Consequences*

Shuffle Lecture and Luncheon

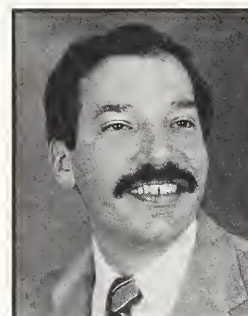
Friday, April 28, 11:45 a.m.



"Private Practice"

Rock n' Docs Dance

Friday, April 28, 8:30 p.m.



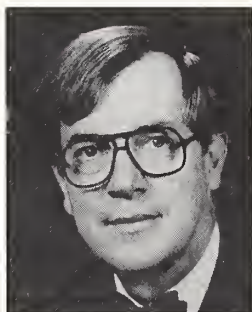
Paul Ginsberg, Ph.D.

Executive Director

Physician Payment Review Commission

"Harvard Resource Based Relative Value Scale"

Saturday, April 29, 9:30 a.m.

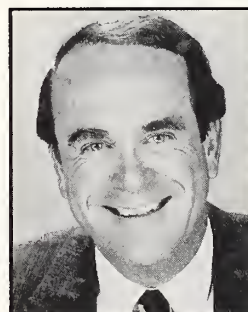


Daniel H. Johnson, Jr., M.D.

Vice Speaker of the House of Delegates

American Medical Association

Saturday, April 29, 3:30 p.m.



Mr. Joe Griffith

Dallas, Texas

"Laughter is the Best Medicine"

Inaugural Banquet

Saturday, April 29, 7:00 p.m.

Conference Program

THURSDAY, APRIL 27, 1989

9:00 a.m.

Arkansas State Medical Board

10:00 a.m.

Golf and Tennis Tournament
Hot Springs Country Club

1:00 p.m. - 5:00 p.m.

Registration
Mezzanine, Arlington Hotel

3:30 p.m. - 4:45 p.m.

Council Meeting

4:00 p.m. - 4:45 p.m.

New Delegate Orientation

5:00 p.m. - 6:30 p.m.

House of Delegates
(Congressional District Caucuses to follow)

7:00 p.m.

Presidents' Reception and Silent Auction
(special invitation)
AMS Officers, Delegates, Councilors and Past Presidents as well as the Auxiliary Past Presidents will be honored at this reception.

FRIDAY, APRIL 28, 1989

7:30 a.m. - 5:00 p.m.

Registration
Mezzanine, Arlington Hotel

7:30 a.m. - 9:30 a.m.

Continental Breakfast
Exhibit Area Open
Arlington Exhibit Hall

9:00 a.m.

Arkansas State Medical Board

9:30 a.m. - 10:30 a.m.

First Feature Session
"The Massachusetts Universal Health Care Plan: Is it a National Trend?"

William M. McDermott, Jr., M.D., Executive Vice President, Massachusetts Medical Society will give a first-hand report.

10:30 a.m. - 10:45 a.m.

Break

10:45 a.m. - 11:45 a.m.

Reference Committee meetings

11:45 a.m. - 1:30 p.m.

Shuffield Lecture and Luncheon
Presentation of the 1989 Shuffield Award.

Peter W. Huber, J.D., Ph.D., author of *Liability, the Legal Revolution and its Consequences* will discuss the law of accidents - who's responsible, who pays and for what?

12:00 noon

Arkansas State Board of Health

1:30 p.m. - 3:00 p.m.

Exhibit Area Open
Arlington Exhibit Center
A dessert bar with the Arlington's finest confections awaits you while you visit the exhibits.

3:00 p.m. - 4:00 p.m.

Second Feature Session
"Cookbook Medicine: What the Future Holds"
Call them what you like - standards, guidelines, parameters - they are beginning to define the way medicine is taught, practiced, and paid for. Speaker to be announced.

4:15 p.m.

Council Meeting

6:30 p.m. - 8:30 p.m.

Blue Cross Blue Shield Reception
Arlington Hotel

8:30 p.m.

Rock n' Docs Dance
Bend the rules! Forget the regulations! "Private Practice" will be performing their specialty - good old rock n' roll music.

SATURDAY, APRIL 29, 1989

7:30 a.m. - 5:00 p.m.

Registration open

Mezzanine, Arlington Hotel

7:30 a.m.

Council Meeting (Breakfast)

7:30 a.m. - 9:30 a.m.

Continental Breakfast

Exhibit Area Open

Arlington Exhibit Center

9:00 a.m.

**Speaker, Vice-Speaker & Reference
Committee Chairmen meeting**

9:30 a.m. - 11:00 a.m.

Third Feature Session

"Harvard Resource Based Relative Value
Scale"

Paul Ginsberg, Ph.D., Executive
Director, Physician Payment Review Com-
mission, Washington, D.C., will discuss the
Commission's recommendations to be pre-
sented to Congress.

11:00 a.m. - 1:00 p.m.

Buffet Lunch and Grand Prize Drawing

Exhibit Area Open

Arlington Exhibit Center

Register for a 4 day, 3 night Grand Prize Va-
cation to the beautiful Bahamas Princess
Resort and Casino, Freeport, Grand Bahama
Island. Donated by **Tours & Travel**,
Russellville, Arkansas. Must be present to
win.

12:00 noon

Fifty Year Club Luncheon

Arlington Hotel

1:00 p.m. - 3:30 p.m.

Specialty Meetings

Arkansas Academy of Family Physicians

Sectional Meeting. Speaker to be an-
nounced. AAFP-approved for 1-1/2 CME
credit hours.

Joint meeting of the **Alan Cazort Allergy**

Society of Arkansas and the **Arkansas
Chapter of the American Academy of
Pediatrics**. "Surgical Intervention in
Pediatric Sinus Disease," Michael J. Gu-
rucharri, M.D., Speaker

Arkansas Orthopaedic Society

"Current Happenings in Orthopaedics
Nationally," Allen S. Edmonson, M.D.,
Speaker

**Arkansas Chapter of the American Soci-
ety of Otolaryngology** Meeting time:

11:00 a.m. - 4:00 p.m.

**Arkansas Chapter of the American Asso-
ciation of Pathologists** General business
meeting with discussion of the new
Constitution.

**Arkansas Society of Plastic and Recon-
structive Surgeons** General business
meeting.

**Arkansas Chapter of the American Col-
lege of Radiology** General business
meeting.

**American College of Emergency Physi-
cians** "Status of Emergency Medicine in
Arkansas"

Arkansas Urologic Society Luncheon
meeting. Robert Krane, M.D., Department
of Urology, Boston University School of
Medicine will be speaking. Meeting time:
12:00 noon.

3:30 p.m. - 5:30 p.m.

House of Delegates and Memorial Service

7:00 p.m.

Inaugural Banquet

Entertainment: "Laughter is the Best Medi-
cine", Joe Griffith, Humorist

Registration Information

The Arkansas Medical Society is proud to present "Focus on the Future" a comprehensive meeting which will take an in-depth look at the future of medicine in Arkansas.

The 2-1/2 day meeting, which includes the regular business sessions of the Society, is highlighted by four seminars featuring speakers whose views of the future of medicine must be heard.

Noteworthy speakers include William M. McDermott, M.D., Executive Vice President of the Massachusetts Medical Society; Paul Ginsberg, Ph.D., Executive Director, Physician Payment Review Commission; and Peter Huber, J.D., Ph.D., author of an acclaimed book, *Liability, the Legal Revolution and its Consequences*.

Special social activities planned are a golf and tennis tournament, Presidents' Reception and Silent Auction, and a Rock n' Docs dance with a band whose speciality is great music!

Hotel Reservations

Call the Arlington Hotel at 1 (800) 643-1502 or (501) 623-7771. Be sure to tell them you are with the Arkansas Medical Society Meeting to be held April 27 - 29, 1989.

Conference Registration Form

PLEASE PRINT LEGIBLY

Name _____

Title _____ Phone () _____
(Councillor, Officer, Delegate, Past President, etc.)

Specialty _____

Spouse's name (as it will appear on their badge) _____

Address _____

City _____ State _____ Zip _____

Registration Amount Enclosed _____ \$ _____

Spouse Registration Amount Enclosed _____ \$ _____

Total Amount Enclosed _____ \$ _____

Please check the sessions you plan to attend:

- ☐ First Feature Session - Massachusetts Universal Health Care Plan
- ☐ Shuffield Lecture/Luncheon - Liability, the Legal Revolution and its Consequences
- ☐ Second Feature Session Cookbook Medicine

- ☐ Rock n' Docs Dance Entertainment: "Private Practice"
- ☐ Third Feature Session - Harvard Resource Based Relative Value Scale
- ☐ Inaugural Banquet Joe Griffith, Humorist

**Return this form with your check made payable to the Arkansas Medical Society to:
Arkansas Medical Society, Post Office Box 5776, Little Rock, Arkansas 72215.**

Registration Fees

AMS Member: \$60 pre-registered, \$75 on-site

Non-member: \$95 pre-registered, \$110 on-site

Spouse: \$40 pre-registered, \$55 on-site

Students and Residents (with I.D.): no charge

Conference Registration

Please tear off the form below and mail it with your check (made payable to Arkansas Medical Society) to: Arkansas Medical Society, Post Office Box 5776, Little Rock, Arkansas 72215.

Golf and Tennis Tournament Registration

The Medical Society will be hosting golf and tennis tournaments at the Hot Springs Country Club. Call the Society office at 1 (800) 542-1058 or (501) 224-8967 for information.

Cancellation Policy

All cancellations must be made in writing and received by April 21, 1989 to receive a refund. No refunds will be given after that date. All refunds, minus a \$10 processing fee will be mailed after the conference. No refunds will be given on site.

YOCON[®]

YOHIMBINE HCl

Description: Yohimbine is a 3a-15a-20B-17a-hydroxy Yohimbine-16a-carboxylic acid methyl ester. The alkaloid is found in Rubaceae and related trees. Also in Rauwolfia Serpentina (L) Benth. Yohimbine is an indolalkylamine alkaloid with chemical similarity to reserpine. It is a crystalline powder, odorless. Each compressed tablet contains (1/12 gr.) 5.4 mg of Yohimbine Hydrochloride.

Action: Yohimbine blocks presynaptic alpha-2 adrenergic receptors. Its action on peripheral blood vessels resembles that of reserpine, though it is weaker and of short duration. Yohimbine's peripheral autonomic nervous system effect is to increase parasympathetic (cholinergic) and decrease sympathetic (adrenergic) activity. It is to be noted that in male sexual performance, erection is linked to cholinergic activity and to alpha-2 adrenergic blockade which may theoretically result in increased penile inflow, decreased penile outflow or both.

Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

Indications: Yocon[®] is indicated as a sympatholytic and mydriatic. It may have activity as an aphrodisiac.

Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the CNS and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

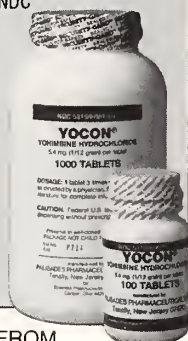
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon[®] 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221. November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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Program Information

Convention Officials

Convention Chairman

Glen F. Baker, M.D., Little Rock

Committee Members

Carlos Araoz, M.D., Little Rock

Walter O'Neal, M.D., Little Rock

F. Patrick Maloney, M.D., Little Rock

Charles H. Rodgers, M.D., Little Rock

Ex-officio

John M. Hestir, M.D., DeWitt

James R. Weber, M.D., Jacksonville

Mrs. Deno Pappas, Hot Springs

Mrs. William E. Harrison, Little Rock

Continuing Medical Education Credit

As an organization accredited for continuing medical education, the Arkansas Medical Society Committee on Scientific Programs certifies that this continuing medical education activity meets the criteria for 4 hours of hour-for-hour credit in Category I of the Physician's Recognition Award of the American Medical Association.

General Information

Registration

The convention registration desk will be located on the mezzanine of the Arlington Hotel and will be staffed at the following times:

Thursday, April 27 1:00 p.m. - 5:00 p.m.

Friday, April 28 7:30 a.m. - 5:00 p.m.

Saturday, April 29 7:30 a.m. - 5:00 p.m.

No person will be admitted to any activity of the annual session without first registering. Upon checking in at the convention registration desk, you will receive a convention program, your name badge, tickets for meals and social functions, and other convention material.

Registration Fees

	Pre-registered	On-site Registration
Member	\$60.00	\$75.00
Non-member	\$95.00	\$110.00
Spouse	\$40.00	\$55.00

No charge for Students and Residents.

Telephone Service

The Society will have a convention telephone at the registration desk during registration hours for your convenience. Call the Arlington Hotel operator at 623-7771 and ask for the Arkansas Medical Society registration desk. AMS staff will man the telephone during registration hours. You may leave this number with your office personnel in case of emergencies.

Exhibits

Commercial and scientific exhibits will be on display in the Arlington Exhibit Center. Dr. Glen Baker, Convention Chairman, urges all members and their guests to take the time to visit the displays. The exhibits are a part of the educational program of the convention and provide members with the latest information on progress in pharmaceutical research, developments in instruments and equipment, insurance, accounting systems, computers, investments, and other new products and services available. The exhibits represent an important contribution to the convention. You are urged to visit each booth and let the exhibitors know you appreciate their participation.

Exhibit Hours

Friday, April 28th: 7:30 a.m. - 9:30 p.m.
1:30 p.m. - 3:00 p.m.

Saturday, April 29th: 7:30 a.m. - 9:30 a.m.
11:00 a.m. - 1:00 p.m.

Social Events

Thursday, April 27th

10:00 a.m. **Arkansas Medical Society Golf and Tennis Tournament** at the Hot Springs Country Club. Participants must pre-register.

7:00 p.m. **Presidents' Reception and Silent Auction.** AMS Officers, Delegates, Councilors and Past Presidents as well as the Auxiliary Past Presidents will be honored at this reception.

Friday, April 28th

6:30 p.m. **Blue Cross Blue Shield will host a reception** in the Arlington Hotel for Arkansas Medical Society members and their guests.

8:30 p.m. **Rock n' Docs Dance - Music by Private Practice.** The AMS Young Physicians Committee will sponsor a dance for all members and their guests. Private Practice, a popular group of medical students who play in Little Rock night clubs, will provide the get down and boogie music.

Saturday, April 29th

11:00 a.m. **Exhibitor Luncheon and Grand Prize Drawing.** Register for the 4 day, 3 night Grand Prize Vacation to the beautiful Bahamas Princess Resort and Casino, Freeport, Grand Bahama Island. Donated by **Tours & Travel**, Russellville, Arkansas. Must be present to win.

7:00 p.m. **Inaugural Banquet.** James R. Weber, M.D., of Jacksonville, will be installed as the 1989-90 President of the Arkansas Medical Society. John M. Hestir, M.D., 1988-89 President, will act as master of ceremonies. After the formalities, Mr. Joe Griffith will round out the evening with "Laughter is the Best Medicine."

Fifty Year Club Luncheon

The Society will host a luncheon for members of the Fifty Year Club at 12:00 noon, Saturday, April 29th, at the Arlington Hotel. The Fifty Year Club President is Henry V. Kirby, M.D., of Harrison. Physicians eligible for the Fifty Year Club this year are Drs. T. Dale Alford, Little Rock; Charles A. Archer, Jr., Conway; James C. Barnett, Heber Springs; Neil E. Compton, Bentonville; Hugh R. Edwards, Searcy; James W. Headstream, Little Rock; Albert S. Koenig, Jr., Fort Smith; Agnes J. Kolb, Little Rock; Claude F. Peters, Pine Bluff; Guy P. Shrigley, Clarksville; Orion H. Stuteville, St. Joe; Frank G. Thibault, Sr., El Dorado; H. W. Thomas, Dermott; and J. Kenneth Thompson, Fort Smith.

Other Meetings

The **Arkansas State Medical Board** will meet at 9:00 a.m. on Thursday, April 27th, and Friday, April 28th.

The **Arkansas State Board of Health** will hold a luncheon meeting at 12:00 noon on Friday, April 28th, in the Arlington Hotel.

Group Specialty Meetings

The **Alan Cazort Allergy Society of Arkansas** and the **Arkansas Chapter of the American Academy of Pediatrics** will hold a joint meeting Saturday, April 29th, from 1:00 p.m. until 3:00 p.m. Michael J. Gurucharri, M.D., of Inverness, Florida, will discuss, "Surgical Intervention in Pediatric Sinus Disease."

The **Arkansas Chapter of the American College of Emergency Physicians** will meet from 1:00 p.m. until 3:00 p.m., Saturday, April 29th. The program will be "The Status of Emergency Medicine in Arkansas."

The **Arkansas Academy of Family Physicians Sectional Meeting** from 1:00 p.m. - 3:00 p.m., Saturday, April 29th. Speaker to be announced. AAFP-approved for 1-1/2 CME credit hours.

The **Arkansas Orthopaedic Society** will meet from 1:00 p.m. until 3:00 p.m., Saturday, April 29th. Allen S. Edmonson, M.D., of Memphis, Tennessee, will speak on "Current Happenings in Orthopaedics Nationally."

The **Arkansas Chapter of the American Academy of Otolaryngology** will meet from 11:00 a.m. until 4:00 p.m., Saturday, April 29th.

The **Arkansas Chapter of the American Association of Pathologists** will meet from 1:00 p.m. until 3:00 p.m., Saturday, April 29th. General business meeting with discussion on the new Constitution.

The **Arkansas Society of Plastic and Reconstructive Surgeons** will hold its annual meeting from 1:30 p.m. until 3:00 p.m., Saturday, April 29th.

The **Arkansas Chapter of the American College of Radiology** will hold a general business meeting from 1:00 p.m. until 3:00 p.m., Saturday, April 29th.

The **Arkansas Urologic Society** will hold a luncheon meeting at 12:00 noon on Saturday, April 29th. Robert Krane, M.D., Professor and Chairman of the Department of Urology at the Boston University School of Medicine, will present the scientific program. The meeting will conclude with a business session.

Business Session

Meetings of the Council

The Council of the Arkansas Medical Society will meet at the following times:

Thursday, April 27	3:30 p.m.
Friday, April 28	4:15 p.m.
Saturday, April 29	7:30 a.m. Breakfast
Saturday, April 29	Immediately following adjournment of the House of Delegates (brief organizational meeting and group photographs of new officers)

The voting members of the Council are: the councilors, the president, the first vice president, president-elect, secretary, treasurer, and immediate past president. The speaker, vice speaker, and other past presidents are members ex-officio without vote.

New Delegate Orientation

There will be a meeting of new delegates on Thursday, April 27th, at 4:00 p.m. prior to the House of Delegates. This meeting will be to familiarize new delegates with the rules and procedures of the House of Delegates.

House of Delegates

The opening session of the House of Delegates of the Arkansas Medical Society will begin at 5:00 p.m. on Thursday, April 27th. Speaker of the House Sybil Hart, M.D., will preside, assisted by Vice Speaker James Gardner, M.D.

All items of business to be considered by the House must either be printed in the March issue of the *Journal* or submitted to the headquarters office in writing twenty days prior to the meeting. Any new business proposed during the session of the House of Delegates must have a two-thirds vote of attending delegates for introduction.

Items of business will be referred by the Speaker of the House of Delegates to one of two reference committees. Open hearings on those items of business will be held by the reference committees on Friday, April 28th at 10:45 a.m. All members of the Society are welcome to attend the meetings of the reference committees and to

express views on the various reports, resolutions, and other items of business.

The following will be seated at the House of Delegates meeting during the 1989 Annual Session:

Officers

Sybil R. Hart, Blytheville, Speaker, (ex-officio)
James L. Gardner, Hot Springs, Vice Speaker, (ex-officio)
John M. Hestir, DeWitt, President (ex-officio)
James R. Weber, Jacksonville, President-elect (ex-officio)
Glen F. Baker, Little Rock, First Vice President (ex-officio)
Charles H. Rodgers, Little Rock, Secretary (ex-officio)
James M. Kolb, Jr., Russellville, Treasurer (ex-officio)

Councilors

District 1: Merrill J. Osborne, Blytheville
J. Larry Lawson, Paragould
District 2: Jim E. Lytle, Batesville
John E. Bell, Searcy
District 3: Hoy B. Speer, Jr., Stuttgart
L. J. P. Bell, Helena
District 4: Lloyd G. Langston, Pine Bluff
Paul A. Wallick, Monticello
District 5: George Warren, Smackover
Cal R. Sanders, Camden
District 6: F. E. Joyce, Texarkana
James D. Armstrong, Ashdown
District 7: Thomas H. Hollis, Hot Springs
Ronald J. Bracken, Hot Springs
District 8: David L. Barclay, Little Rock
Paul Cornell, Little Rock
Warren Douglas, Little Rock
William N. Jones, Little Rock
Charles Logan, Little Rock
Harold Purdy, Little Rock
District 9: Robert H. Langston, Harrison
Vacant
District 10: A. C. Bradford, Fort Smith
Gerald Stolz, Russellville
Morton Wilson, Fort Smith

Past Presidents (ex-officio)

Charles R. Henry, Sr., Little Rock
H. King Wade, Hot Springs
Joe Verser, Harrisburg

C. Randolph Ellis, Malvern
 Joseph A. Norton, Little Rock
 H. W. Thomas, Dermott
 Ross E. Fowler, Harrison
 J. W. Kennedy, Arkadelphia
 C. Stanley Applegate, Jr., Springdale
 C. Robert Watson, Little Rock
 John P. Wood, Mena
 Ben N. Saltzman, Little Rock
 T. E. Townsend, Pine Bluff
 Albert S. Koenig, Jr., Fort Smith
 W. Payton Kolb, Little Rock
 George F. Wynne, Warren
 A. E. Andrews, Texarkana
 Kemal E. Kutait, Fort Smith
 Purcell Smith, Jr., Little Rock
 Morriss M. Henry, Fayetteville
 Asa A. Crow, Paragould
 Charles F. Wilkins, Jr., Russellville
 John P. Burge, Lake Village
 C. C. Long, Fort Smith (Honorary)
 Ken Lilly, Fort Smith
 W. Ray Jouett, Little Rock

Delegates for 1989 (as submitted by county)

Arkansas (1) Dennis B. Yelvington - Delegate
 John Roark - Alt. Delegate
Ashley (1) Don L. Toon - Delegate
 Curtis E. Ripley - Alt. Delegate
Baxter (1) Robert L. Baker or
 Peter A. MacKercher - Delegate
 John F. Guenthner - Alt. Del.
Benton (3)
Boone (1) John T. Troupe - Delegate
 Rhys A. Williams - Alt. Delegate
Bradley (1) Joe H. Wharton - Delegate
 Kerry F. Pennington - Alt. Del.
Carroll (1) Oliver Wallace - Delegate
Chicot (1) Danny T. Berry - Delegate
 Homer K. Beavers - Alt. Del.
Clark (1) James Lowry - Delegate
 George D. Taylor - Alt. Delegate
Cleburne (1) Thomas L. Eans - Delegate
 Amador C. Campos - Alt. Del.
Columbia (1) H. Scott McMahan - Delegate
 John E. Alexander, Jr. - Alt. Del.
Conway (1)
Craighead-Poinsett (4) Joe H. Stallings, Jr. - Delegate
 Don B. Vollman, Jr. - Delegate
 Jerry Blaylock - Delegate
 Robert D. Frey - Delegate
 S. M. Blanchard - Delegate
Crawford (1) Millard C. Edds - Delegate
 D. Bart Sills - Alt. Delegate
Crittenden (1) Steve P. Schoettle - Delegate
 Edgar S. Ferguson - Alt. Del.

Cross (1) Robert A. Hayes, Jr. - Delegate
 J. Trent Beaton - Alt. Delegate
Dallas (1) Jack Dobson - Delegate
Desha (1) Guy U. Robinson - Delegate
 Howard R. Harris - Alt. Delegate
Drew (1) Paul A. Wallick - Delegate
Faulkner (1) Jimmie J. Magie - Delegate
 Robert B. Rook - Alt. Delegate
Franklin (1) David L. Gibbons - Delegate
Garland (5) Lee G. Atherton - Delegate
 James L. Gardner - Delegate
 Brenda N. Powell - Delegate
 Eugene M. Shelby - Delegate
 Luther R. Walley - Delegate
Grant (1) Clyde D. Paulk - Delegate
 Jack M. Irvin - Alt. Delegate
Green-Clay (1) Richard O. Martin - Delegate
 J. Darrell Bonner - Alt. Delegate
Hempstead (1) James Branch - Delegate
Hot Springs (1) C. Randolph Ellis - Delegate
 Gregory M. Loyd - Alt. Delegate
Howard-Pike (1) Joe D. King - Delegate
 Robert R. Sykes - Alt. Delegate
Independence (1) Verona Brown* - Delegate
Jackson (1) Ramon E. Lopez - Delegate
Jefferson (5) Raymond A. Irwin, Jr. - Delegate
 Kenneth A. Martin - Delegate
 Lee A. Forestiere - Delegate
 Ishmael S. Reid, Jr. - Delegate
 Gary F. Frigon - Delegate
 David T. Nixon - Alt. Delegate
 Anna T. Ridling - Alt. Delegate
 Calvin M. Bracy - Alt. Delegate
 Donald H. Pennington - Delegate
Johnson (1)
Lafayette (1)
Lawrence (1) Ralph F. Joseph - Delegate
 Ted S. Lancaster - Alt. Delegate
Lee (1) Duong N. Ly - Delegate
 E. C. Fields - Alt. Delegate
Little River (1) Robert D. Dalby - Delegate
 Joe G. Shelton, Jr. - Alt. Del.
Logan (1) Sanford E. Hutson, III - Delegate
 Guy Ulrich - Alt. Delegate
Lonoke (1) Jerry C. Chapman - Delegate
 Leslie F. Anderson - Alt. Del.
Miller (3) John A. Gillean - Delegate
 Paul D. Meredith - Delegate
 Herbert B. Wren - Delegate
Mississippi (1) Eldon Fairley - Delegate
 Clinton G. Melton - Alt. Delegate
Monroe (1) Neylon C. David - Delegate
 W. L. Walker - Alt. Delegate
Nevada (1) H. Blake Crow - Delegate
 Charles A. Vermont - Alt. Del.
Ouachita (1) Lawrence F. Braden - Delegate
 R. H. Nunnally - Alt. Delegate

Phillips (1) L.J.P. Bell, Sr. - Delegate
Robert D. Miller, Jr. - Alt. Del.

Polk (1) John Finck - Delegate
David D. Fried - Alt. Delegate

Pope (2) James G. Burgess - Delegate
Frank M. Lawrence - Delegate
Kenneth O. New - Alt. Delegate
A. Dale Barton - Alt. Delegate

Pulaski (28)
The following are Pulaski County Delegates:
E. Stewert Allen
Glen F. Baker
Raymond V. Biondo
Warren C. Boop, Jr.
Curry B. Bradburn, Jr.
Scott H. Brown
Kelsy J. Caplinger, III
James K. Cornett
Byron D. Curtner
Gilbert O. Dean
Charles P. Fitzgerald
Gene L. France
James L. Hagler
Edwin Hankins, III
Fred O. Henker, III
C. Reid Henry, Jr.
Fred J. Kittler
Marvin Leibovich
R. Jerry Mann
James Ewell McDonald
J. Mayne Parker
John D. Pike
Michael C. Roberson
Ashley Sloan Ross, Jr.
Bruce E. Schratz
Robert F. Shannon
Frank M. Sipes
Robert G. Valentine, Jr.
Randolph (1) Albert L. Baltz - Delegate
Andrew J. Jansen, III - Alt. Del.
Saline (1) Marvin N. Kirk, Jr. - Delegate
Frank G. Thibault, Jr. - Alt. Del.
Sebastian (9) Carl L. Williams - Delegate
Andre J. Nolewajka - Delegate
John L. Lange - Delegate
A. Samuel Koenig, III - Delegate

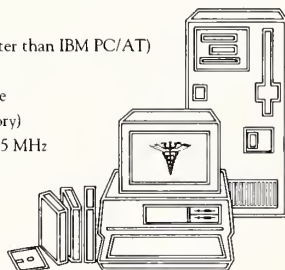
McDonald Poe, Jr. - Delegate
R. Cole Goodman, Jr. - Delegate
John R. Swicegood - Delegate
William H. Schemel - Delegate
Jimmie G. Atkins - Alt. Delegate
David B. Kocher - Alt. Delegate
John H. Wikman - Alt. Delegate
Randy Ennen - Alt. Delegate
John D. Wells - Alt. Delegate
Steve B. Nelson - Alt. Delegate
David W. Hunton - Alt. Delegate
Jerry Stewart - Alt. Delegate
Jonathan Hoyt - Delegate
Michael L. Buffington - Alt. Del.
St. Francis (1) Samuel A. McGuire, III - Del.
Tri-County (1) Michael N. Moody - Delegate
Thomas H. Benton - Alt. Del.
Union (2) Raymond N. Bowman - Delegate
Willis M. Stevens, Jr. - Delegate
Bert Dougherty - Alt. Delegate
John B. Ratcliff - Alt. Delegate
Van Buren (1) John A. Hall - Delegate
Charles G. Pearce - Alt. Delegate
Washington (5) Danny L. Proffitt - Delegate
Anthony Hui - Delegate
David L. Rogers - Delegate
William B. Nowlin - Delegate
J. Warren Murry - Delegate
E. Mitchell Singleton - Alt. Del.
Gareth Eck - Alt. Delegate
Morriss M. Henry - Alt. Delegate
White (2) Daniel S. Davidson - Delegate
S. Clark Fincher - Delegate
Robert E. Elliott - Alt. Delegate
J. L. Stinnett - Alt. Delegate
Woodruff (1) James E. Rowe - Delegate
Yell (1) James L. Maupin - Delegate
Resident Physician
Section (1) Charles Mason - Delegate
Todd Holt - Alt. Delegate
Medical Student
Section (1) Terri Blackstock - Delegate
Jeffrey A. Hale - Alt. Delegate
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BRIEF SUMMARY

CONTRAINDICATIONS

There are no known contraindications to the use of sucralfate.

PRECAUTIONS

Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE

There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

HOW SUPPLIED

CARAFATE (sucralfate) 1-gm tablets are supplied in bottles of 100 (NDC 0088-1712-47) and in Unit Dose Identification Paks of 100 (NDC 0088-1712-49). Light pink scored oblong tablets are embossed with CARAFATE on one side and 1712 bracketed by C's on the other.

Issued 1/87

Reference:

1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.

Another patient benefit product from



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House of Delegates Agendas

First Meeting, House of Delegates

5:00 p.m., Thursday, April 27th

Sybil Hart, M.D., Speaker

James Gardner, M.D., Vice Speaker

1. Call to order
2. Presentation of the Colors
3. Welcome to Hot Springs
Mayor Jon Starr
4. Introduction of guests
Mrs. Joe Ed Smith, Chairman, Legislation Committee, American Medical Association Auxiliary
Mrs. David C. Thibodeaux, President, Southern Medical Association Auxiliary
Mrs. W. Ray Jouett, President, Arkansas Medical Society Auxiliary, Little Rock
Mrs. J. Larry Lawson, President-elect, Arkansas Medical Society Auxiliary, Paragould
5. President of the Arkansas Medical Society, John M. Hestir, M.D., of DeWitt, will give his farewell address.
6. Adoption of the 112th House of Delegates minutes as published in the June 1988 issue of the *Journal of the Arkansas Medical Society*.
7. Adoption of the October 9th House of Delegates minutes held during the fall meeting of the Arkansas Medical Society and as published in the December 1988 issue of the *Journal of the Arkansas Medical Society*.
8. Presentations
9. New Business
All reports, resolutions, and other items of business received by the headquarters office twenty days prior to the meeting shall be included in the agenda. Any items of business received after April 7th, must have two-thirds consent of attending delegates before introduction. All items will be referred to reference committees.
10. Announcement of vacancy on State Board Arkansas State Medical Board (Third Congressional District)
11. Recess until Saturday

Final Meeting, House of Delegates

3:30 p.m., Saturday, April 29th

Sybil Hart, M.D., Speaker

James Gardner, M.D., Vice Speaker

1. Call to order
2. Election of officers
Nominations as submitted by the Nominating Committee:
President-elect:
William N. Jones, M.D., Little Rock
T. E. Townsend, M.D., Pine Bluff
First Vice President:
Glen F. Baker, M.D., Little Rock
Second Vice President
Brenda N. Powell, M.D., Hot Springs
Third Vice President:
Joe H. Stallings, Jr., M.D., Jonesboro
Treasurer:
James M. Kolb, Jr., M.D., Russellville
Secretary:
Charles H. Rodgers, M.D., Little Rock
Speaker of the House:
John Crenshaw, M.D., Pine Bluff
Vice Speaker of the House:
James Gardner, M.D., Hot Springs
Delegate to the AMA (1/1/90 - 12/31/91):
W. Payton Kolb, M.D., Little Rock
Alternate Delegate to the AMA (1/1/90 - 12/31/91):
Asa A. Crow, M.D., Paragould
Councilors:
District 1:
Merrill J. Osborne, M.D., Blytheville
District 2:
Jim E. Lytle, M.D., Batesville
District 3:
Hoy B. Speer, Jr., M.D., Stuttgart
District 4:
Lloyd G. Langston, M.D., Pine Bluff
District 5:
Wayne G. Elliott, M.D., El Dorado
District 6:
F. E. Joyce, M.D., Texarkana
District 7:
Thomas H. Hollis, M.D., Hot Springs

District 8:

Paul J. Cornell, M.D., Little Rock
Charles Logan, M.D., Little Rock
Warren Douglas, M.D., Little Rock

New Position:

Glen F. Baker, M.D., Little Rock

District 9:

David L. Rogers, M.D., Fayetteville

District 10:

A. C. Bradford, M.D., Fort Smith

3. Address by *Daniel H. Johnson, Jr., M.D., New Orleans, LA., Vice Speaker of the House of Delegates of the American Medical Association*

4. Reports of Reference Committees:

Committee #1:

George Roberson, M.D., Chairman

Committee #2:

James Armstrong, M.D., Chairman

5. Supplemental report of the Council: J. Larry Lawson, M.D., Chairman (report covers meetings of the Council held during the annual session).

6. New Business

Announcement of nominee for the Arkansas State Medical Board

Other new business

7. Memorial Service. Members of the Arkansas Medical Society and Auxiliary who have died this past year will be remembered. Members to be honored are:

Society Members

Frank M. Adams, Hot Springs
Raymond C. Cook, Little Rock
Louis A. Draeger, Danville
John Q. Elliott, Blytheville
L. Murphey Henry, Fayetteville
Ernest J. Hermann, Jr., Abilene, Texas
Bryant W. Jones, Paragould
Bobby Earl McKee, Jonesboro
Charles Norman McKenzie, Little Rock
Sanford C. Monroe, Pine Bluff
James M. Nisbett, Little Rock
Johnnie P. Price, Jr., Monticello
Charles W. Rasco, Jr., DeWitt
E. Frank Reed, Jr., Pine Bluff
John A. Teeter, Little Rock
Robert M. Tirman, Little Rock

Auxiliary Members

Mrs. Thomas H. Allen, Little Rock
Mrs. Tom L. Dunn, Hampton
Mrs. Buford M. Gardner, Fayetteville
Mrs. Stephen Graves, Fort Smith
Mrs. Howard Harris, Dumas
Mrs. Frank L. Irby, El Doardo
Mrs. J. W. Jacks, Hiwassee

Mrs. Bryant W. Jones, Paragould

Mrs. C. W. Jones, Benton

Mrs. Henry E. Mobley, Morrilton

Mrs. Joseph F. Shuffield, Little Rock

Mrs. Ruth Criglow Sparks, Crossville, TN (formerly of Little Rock)

Mrs. A. G. Sullenburger, Pine Bluff

Reference Committees

Reference Committees are appointed by the Speaker of the House of Delegates to consider the various reports and resolutions. Reports published in the March issue of the *Journal*, as well as any reports and resolutions presented at the first meeting of the House on April 27th, will be referred by the Speaker to the reference committees. The committees will hold open hearings at 10:45 a.m. on Friday, April 28th. After the opening hearings, the reference committees will hold executive sessions for the purpose of preparing recommendations and reports for the final House of Delegates. Reports of the Reference Committees will be acted upon by the House of Delegates at the Saturday session. Reference Committee members are as follows:

Reference Committee #1

George V. Roberson, Jr., Pine Bluff, Chairman
Jimmie J. Magie, Conway
Joe H. Stallings, Jr., Jonesboro
H. Wade Westbrook, West Memphis
Donald B. Baker, Fayetteville, alternate
Paul I. Wills, Fort Smith, alternate

Reference Committee #2

James D. Armstrong, Ashdown, Chairman
Robert L. Baker, Mountain Home
Merrill J. Osborne, Blytheville
Robert R. Sykes, Nashville
Don B. Vollman, Jr., Jonesboro
Eldon Fairley, Osceola, alternate
Nancy Rector, Little Rock, alternate
Morton C. Wilson, Fort Smith, alternate

Todd Holt and Elicia Sinor of Little Rock will serve as observers for the Resident Physician Section. Ronald C. McGaugh, Jr., Greg Waters, and Cynthia Gierach will be observers for the Medical Student Section.

State Board Vacancy

Arkansas State Medical Board

A vacancy will occur December 31, 1989, in the Third Congressional District position of the Arkansas State Medical Board. Members from the counties in the district are urged to meet immediately following adjournment of the House of Delegates on Thursday to vote for nominees. The term of office will be for eight years. Nominations should be reported to the Society personnel immediately following the caucuses (only one nomination is required).

Rhys A. Williams is currently serving the term which will expire in December, 1989. Dr. Williams is eligible to succeed himself.

Counties in the Third Congressional District are Baxter, Benton, Boone, Carroll, Crawford, Franklin, Johnson, Logan, Madison, Marion, Newton, Scott, Searcy, Sebastian, Van Buren, and Washington.

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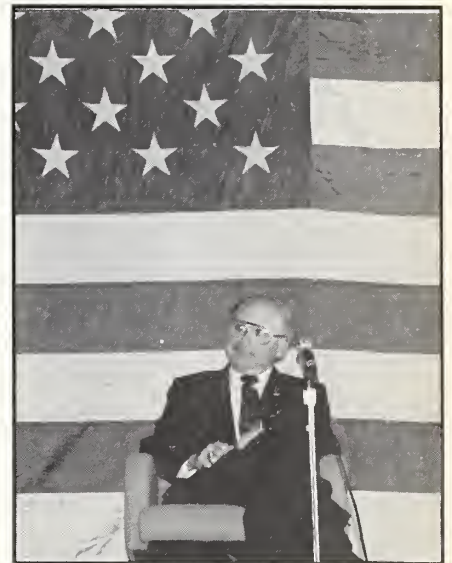
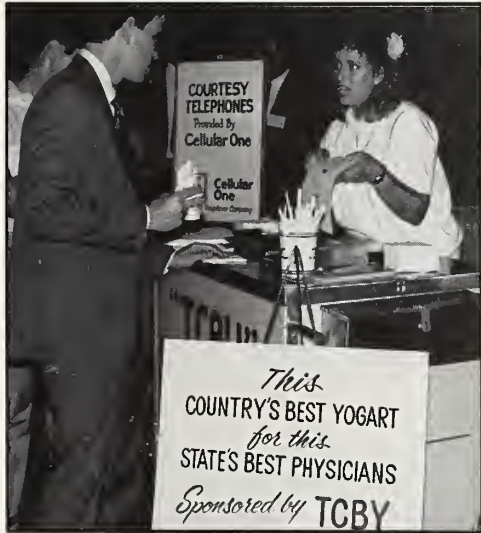
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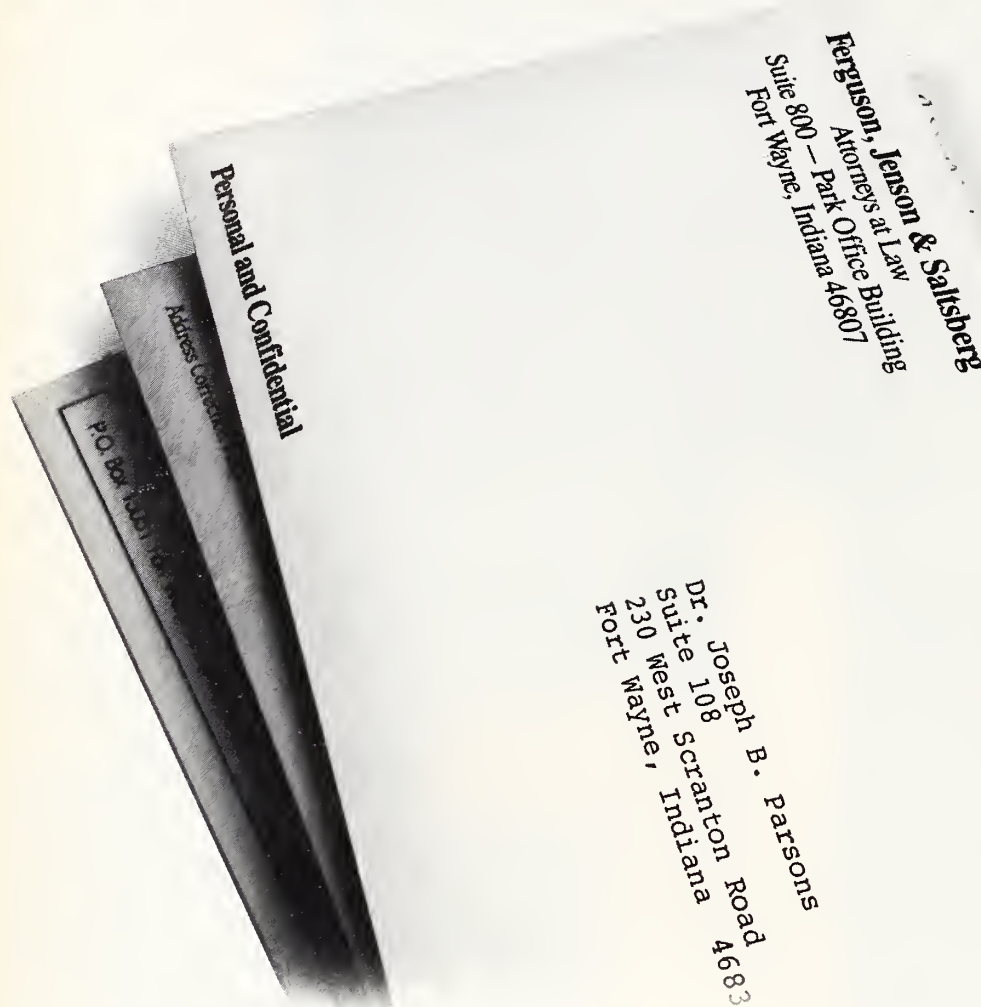
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Summary.

Consult the package literature for prescribing information.

Indication: Lower respiratory infections, including pneumonia, caused by *Streptococcus pneumoniae*, *Haemophilus influenzae*, and *Streptococcus pyogenes* (group A β -hemolytic streptococci).

Contraindication: Known allergy to cephalosporins.

Warnings: CECLOR SHOULD BE ADMINISTERED CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS. PENICILLINS AND CEPHALOSPORINS SHOW PARTIAL CROSS-ALLERGENICITY. POSSIBLE REACTIONS INCLUDE ANAPHYLAXIS.

Administer cautiously to allergic patients.

Pseudomembranous colitis has been reported with virtually all broad-spectrum antibiotics. It must be considered in differential diagnosis of antibiotic-associated diarrhea. Colon flora is altered by broad-spectrum antibiotic treatment, possibly resulting in antibiotic-associated colitis.

Precautions:

- Discontinue Cecilor in the event of allergic reactions to it.
- Prolonged use may result in overgrowth of nonsusceptible organisms.
- Positive direct Coombs' tests have been reported during treatment with cephalosporins.
- Cecilor should be administered with caution in the presence of markedly impaired renal function. Although dosage adjustments in

moderate to severe renal impairment are usually not required, careful clinical observation and laboratory studies should be made.

- Broad-spectrum antibiotics should be prescribed with caution in individuals with a history of gastrointestinal disease, particularly colitis.
- Safety and effectiveness have not been determined in pregnancy, lactation, and infants less than one month old. Cecilor penetrates mother's milk. Exercise caution in prescribing for these patients.

Adverse Reactions: (percentage of patients)

Therapy-related adverse reactions are uncommon. Those reported include:

- Gastrointestinal (mostly diarrhea): 2.5%.
- Symptoms of pseudomembranous colitis may appear either during or after antibiotic treatment.
- Hypersensitivity reactions (including morbilliform eruptions, pruritus, urticaria, and serum-sickness-like reactions that have included erythema multiforme [rarely, Stevens-Johnson syndrome] and toxic epidermal necrolysis or the above skin manifestations accompanied by arthritis/arthralgia, and frequently, fever): 1.5%; usually subside within a few days after cessation of therapy. Serum-sickness-like reactions have been reported more frequently in children than in adults and have usually occurred during or following a second course of therapy with Cecilor. No serious sequelae have been reported. Antihistamines and corticosteroids appear to enhance resolution of the syndrome.

- Cases of anaphylaxis have been reported, half of which have occurred in patients with a history of penicillin allergy.
- As with some penicillins and some other cephalosporins, transient hepatitis and cholestatic jaundice have been reported rarely.
- Rarely, reversible hyperactivity, nervousness, insomnia, confusion, hypotonia, dizziness, and somnolence have been reported.
- Other: eosinophilia, 2%; genital pruritus or vaginitis, less than 1%, and, rarely, thrombocytopenia.

Abnormalities in laboratory results of uncertain etiology

- Slight elevations in hepatic enzymes.
- Transient fluctuations in leukocyte count (especially in infants and children).
- Abnormal urinalysis; elevations in BUN or serum creatinine.
- Positive direct Coombs' test.
- False-positive tests for urinary glucose with Benedict's or Fehling's solution and Clinistest[®] tablets but not with Tes-Tape[®] (glucose enzymatic test strip, Lilly).

(061088U)

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New Business

Resolutions

Resolution from the Young Physicians Committee Concerning Medicaid/Medicare Reimbursement to Rural Hospitals

Whereas, two Arkansas hospitals in Eastern Arkansas have closed in the last six months, and more are threatened due to financial hardship; and

Whereas, Medicaid/Medicare reimbursement to rural hospitals is frequently much less than that to urban hospitals and, in fact, frequently does not cover the costs incurred by these rural hospitals; and

Whereas, closure of rural hospitals cause a severe hardship to those Arkansas citizens served by those rural hospitals, in effect, making Medicaid/Medicare reimbursement policies discriminatory to citizens of rural Arkansas; and

Whereas, the Arkansas Medical Society is actively involved in solutions to this problem at state and national government levels, it still appears that more effort is needed at the grassroots level; therefore be it

RESOLVED, that the Arkansas Medical Society, through its individual members, begin an organized effort to inform the general public of these discriminatory policies through local media across the state.

Resolution from the Young Physicians Committee Concerning the AMA's Natural Science Ambassador Program

Whereas, our young people are demonstrating a measurable disinterest in science education; and

Whereas, one-third fewer college freshmen are interested in the sciences, one-fourth less in mathematics, while twice as many are interested in business careers; and

Whereas, applications to medical schools have drastically diminished over the last few years; and

Whereas, the resulting decrease in biomedical research and fewer medical personnel will eventually result in the loss of quality health care; and

Whereas, the AMA has begun development of the Natural Science Ambassador Program whereby volunteer physicians speak to fourth, fifth and sixth grade students to rekindle their interest in the sciences, therefore be it

RESOLVED, that the Arkansas Medical Society organize and support projects that would encourage physicians to work with young people in the community, thereby helping to restore their interest in the sciences, while also helping to restore the reputation of physicians as caring citizens and community leaders; and also

RESOLVED, that the Arkansas Medical Society work with the AMA to establish a Natural Science Program in this state.

Resolution from the Young Physicians Committee Concerning Tort Reform in Arkansas

Whereas, the current situation in malpractice and maloccurrence is altering the practice of medicine and the physician patient relationship; and

Whereas, many states such as Utah, Vermont, Kansas, and Wyoming are actively pursuing the establishment of a no-fault program to take malpractice cases out of the courts and before a commission such as the workers compensation program; and

Whereas, the implementation of a no-fault program depends on state legislatures and is getting the best response in small, rural states; and

Whereas, a significant number of patients who fall victim to medical complications, receive no compensation, therefore be it

RESOLVED, that the Arkansas Medical Society organize, with the support of the state legislature, a no-fault system in which the physician is the patient's advocate in episodes of untoward outcomes which are inevitable in the practice of medicine.

Resolution from the Young Physicians Committee Concerning a Physician-owned Insurance Company in Arkansas

Whereas, malpractice insurance is one of the greatest financial intrusions into medical practice; and

Whereas, across the nation physician owned insurance companies have captured as much as 70% of the market in the last 10 years; and

Whereas, the malpractice insurance situation is further complicated by the nonuniformity among the states, forcing physicians to pay large sums for tail policies when moving to different states; therefore be it

RESOLVED, that the Arkansas Medical Society appoint a task force to investigate the feasibility of creating a physician owned insurance company in Arkansas, and further

RESOLVED, that the Arkansas Medical Society be leaders in seeking the establishment of a national network to aid physicians in moving to a new area without the exorbitant tail policies which are now required because of the nonuniformity from state-to-state.

Resolution from the Young Physicians Committee Concerning Payment of Arkansas Medical Society Dues

Whereas, the yearly dues of \$400.00 to be a member of the Arkansas Medical Society can and does prevent some Arkansas physicians from becoming members or renewing their membership; and

Whereas, while the AMS does offer dues exemption to first-year members and one-half dues to second-year members, it does not adequately forewarn these members that full-dues charges will be forthcoming; and

Whereas, new physicians in Arkansas are not adequately appraised that the first-year and second-year discounts for dues are only available if they join while in their first year in the state; and Whereas, these same physicians frequently are not recruited to become members until some time after their first year in the state; therefore be it

RESOLVED, that AMS members be given the option of paying AMS dues by either a recognized credit card or, in cash on a quarterly basis, in addition to the current method; and further be it

RESOLVED, that the Arkansas Medical Society make every effort to identify new physicians in Arkansas, either from another state or from an Arkansas residency program, and offer these physicians an opportunity to be better informed on the AMS dues structure, including what the dues income is used for.

Business Reports

Nominating Committee

Charles Logan, M.D., Chairman

The Nominating Committee met October 9, 1988, prior to the Winter Meeting of the House of Delegates. We wish to present to the Society the following nominees:

President-elect:

William N. Jones, M.D., Little Rock

Thomas E. Townsend, M.D., Pine Bluff

First Vice President:

Glen Baker, M.D., Little Rock

Second Vice President:

Brenda N. Powell, M.D., Hot Springs

Third Vice President:

Joe H. Stallings, Jr., M.D., Jonesboro

Treasurer:

James M. Kolb, Jr., M.D., Russellville

Secretary:

Charles H. Rodgers, M.D., Little Rock

Speaker of the House:

John Crenshaw, M.D., Pine Bluff

Vice Speaker of the House:

James Gardner, M.D., Hot Springs

Delegate to the AMA (1/1/90 to 12/31/91):

W. Payton Kolb, M.D., Little Rock

Alt. Delegate to the AMA (1/1/90 to 12/31/91):

Asa A. Crow, M.D., Paragould

Councilors:

District 1:

Merrill J. Osborne, M.D., Blytheville

District 2:

Jim E. Lytle, M.D., Batesville

District 3:

Hoy B. Speer, Jr., M.D., Stuttgart

District 4:

Lloyd G. Langston, M.D., Pine Bluff

District 5:

Wayne G. Elliott, M.D., El Dorado

District 6:

F. E. Joyce, M.D., Texarkana

District 7:

Thomas H. Hollis, M.D., Hot Springs

District 8:

Paul J. Cornell, M.D., Little Rock

Charles Logan, M.D., Little Rock

Warren Douglas, M.D., Little Rock

New Position:

Robert F. Shannon, M.D., Little Rock

District 9:

David L. Rogers, M.D., Fayetteville

District 10:

A. C. Bradford, M.D., Fort Smith

Nominating Committee Supplemental Report **Charles Logan, M.D., Chairman**

The Nominating Committee would like to make the following recommendations to the Arkansas Medical Society Long Range Planning Committee for their consideration before finalizing their report.

Involving new blood is a must for growth in our Medical Society while experienced hands are invaluable for its continued growth; a blending of both these forces is even better. With this thought in mind, the Nominating Committee would like to recommend the following:

1. AMA Representation - the office of AMA Delegate be limited to three, two-year terms.
2. Treasurer - the office of Treasurer be limited to five, one-year terms.
3. Secretary - the office of Secretary be limited to five, one-year terms.
4. Councilor Representatives - Councilors who fail to attend 50% of the required scheduled meetings during their two-year term of office will automatically be disqualified for re-appointment.

Committee on Aging **Ross E. Fowler, M.D., Chairman**

The Committee on Aging of the Arkansas Medical Society met October 9, 1988, in the B. Finley Vinson Room of the Excelsior Hotel in Little Rock.

Committee members present included Drs. C. Randolph Ellis, Thomas L. Eans, T. E. Townsend, Morton C. Wilson, and Ross E. Fowler. Special guest was Aubrey C. Trimble of the AARP. A letter was received from committee member Dr. Carlos A. Araoz, who was unable to attend the meeting.

The Committee recognized the great need for assistance in improving the health care of our older people and agreed that the first steps are to help them remain active, healthy, independent, and productive. Elderly people's priorities appear to be income security, long-term care, and health costs. Some of the subjects discussed and thought required improvement included:

- Medicare disparity between rural and urban hospital and physician pay
- Home health care
- Nursing home care
- Day-care support centers
- Education concerning drugs
- Pharmacy drug assistance
- Senior citizen activities, meals, and transportation

Living Wills

Security against injury and abuse

The Committee on Aging recommends the assistance of the Arkansas Medical Society in improving their activities.

I wish to thank those on the Committee, Mr. Aubrey Trimble of the AARP, and Peggy Cryer of the Arkansas Medical Society staff for bringing their expertise into this Committee on Aging meeting.

Committee on AIDS **William N. Jones, M.D., Chairman**

The Arkansas Medical Society Committee on AIDS held ten formal meetings and additional subcommittee meetings during 1988 with continued excellent attendance and enthusiastic individual participation. Current members of the committee are: Drs. William N. Jones, Chairman; William L. Mason; Charles R. Henry, Sr.; Donald C. Fournier; Linda A. Markland; E. Clinton Texter, Jr.; A. Stuart Fitzhugh; Ishmael Reid, Jr.; Eugene M. Shelby; Harold Hedges; J. P. Lofgren; Donald G. Browning; Joseph Beck; April Jackson, R.N., M.S.N.; Janet Browne, M.S.; Betty Garrett, L.P.N.; and Mr. Paul Harris.

The organizational meeting of the committee was held on May 6, 1987. Our educational program began on August 15, 1987, and since that time we have held over 150 meetings attended by approximately 8,500 persons of whom 1,300 were physicians or health care professionals.

The epidemic continues to expand with the current forecast by the Centers for Disease Control projecting 365,000 cases and 263,000 deaths by the end of 1992. As of December 26, 1988, there have been 82,406 cases and 46,134 deaths from AIDS in the United States reported to the Centers of Disease Control since 1981. Arkansas has experienced 173 cases and 95 deaths since 1985. The phenomenon called "reporting apathy" has negatively influenced these statistics.

Although physician knowledge and management of AIDS have improved, no significant breakthrough in treatment occurred during 1988. This reinforces the long-term observation that education and behavior modification remain our most important tools to slow this fatal viral epidemic for the foreseeable future.

During 1988 the Committee has:

- * Sent our 1987 Committee on AIDS Report to Governor Clinton and national and state legislators so they would be updated on AIDS in Arkansas and the program of the Arkansas

Medical Society. Throughout the year additional letters were written to key legislators at appropriate times.

- * Conducted a survey of 4,108 member and nonmember physicians to determine their attitudes and awareness of AIDS. The 811 responses received were collated by Miller Research Group and the results were summarized by Dr. J. P. Lofgren, Medical Director of AIDS/STD Program, Arkansas Department of Health. These results were printed in the October 1988 issue of the *Journal of the Arkansas Medical Society*.
- * Endorsed adding ATZ to the Medicaid Drug Formulary.
- * Continued to publish monthly educational articles on AIDS along with statistical updates of AIDS in Arkansas provided by the Arkansas Department of Health.
- * The Committee sponsored an AIDS seminar during the AMS Annual Session last April. The scientific session was open to members and nonmembers alike with 86 persons in attendance - the highest number of attendees to a scientific session held during the meeting. Col. Neal Boswell, Chairman, Department of Medicine, Wilford Hall, Lackland Air Force Base, and Dr. Daniel Barbaro, Director of the AIDS Clinic, Parkland Hospital, University of Texas at Dallas, were two of the outstanding speakers.
- * The Society received the C-Flag, which is the President's Citation of Excellence for Private Sector Initiatives. This citation recognizes outstanding contributions to the American Spirit of Volunteerism and community action which goes above and beyond the call of duty.
- * In June the Society participated in KATV Channel 7 Health Expo. The Committee manned a booth and distributed 300 packets and 2,000 brochures to Arkansans during a two-day period. A formal presentation about AIDS was delivered to the general audience.
- * Applied for and received a \$14,662 contract from the Arkansas Department of Health to continue our educational program.
- * Began a dialogue with members of the staff of the Arkansas Department of Education, Mr. Gary Parrish, Ms. Lynda White, and Ms. Margarie Towery, which will result in the training of teachers of sixteen education department co-op districts who will in turn give AIDS education to their students. The final plans now completed will involve 134 members from 41 counties. These volunteers will help during the regional seminars to be held between March and September 1989.
- * Addressed the ever-growing problem of acceptance of AIDS patients in nursing homes and established a liaison with the Office of Long Term Care and the Division Director, Office of Civil Rights, U. S. Department of Health and Human Services.
- * Encouraged the Arkansas Hospital Association to survey its hospital members to determine hospital costs of treating AIDS patients. The AHA survey results were received for information in November.
- * Encouraged and gave materials and financial support to the Medical Student Section Program F.A.T.E. (Fighting AIDS Through Education). Forty medical students participated and spoke at 12 high schools to 2,500 students. Members of the F.A.T.E. leadership have attended the AIDS Committee meetings since September and have contributed an article to the *Journal of the Arkansas Medical Society* and will soon be featured in the Arkansas Gazette.
- * Presented a health education resolution which was adopted by the House of Delegates of the Society in October endorsing the efforts of Dr. Joycelyn Jones Elders, Director, Arkansas Department of Health, to provide accurate, understandable, and timely health information to Arkansas teenagers.
- * Two AIDS Committee members, Drs. William L. Mason and Harold Hedges, along with AMS member Dr. Robert Searcy, received an Excellence in Health Care Award from the AIDS Foundation of Arkansas for their personal efforts in helping with the AIDS crisis.
- * Planned and organized an AIDS Seminar for physicians and health care professionals entitled, "Practical Approach to AIDS - What You Need to Know", to be held March 11, 1989, in Hot Springs at the Sheraton Lakeshore Resort. Col. Neal Boswell will return along with four clinicians, all of whom were speakers at the 1988 International Conference on AIDS held at Stockholm.
- * Received and answered requests for information on the Arkansas Medical Society AIDS Education Program from the states of New York, Mississippi, Pennsylvania, Wisconsin, Minnesota, and Georgia. Information was also requested from the American Medical Association and the National Information Clearinghouse.
- * Corresponded with and received a letter of support and encouragement from Surgeon General C. Everett Koop.
- * Continued to represent the Arkansas Medical Society on the AIDS Advisory Committee to the Arkansas Department of Health which has been

instrumental in proposing and putting into effect several Arkansas Department of Health regulations concerning AIDS.

- * Worked with the Position Papers Committee to update the AMS position paper on AIDS.
- * Testified at a public hearing in support of the regulation which requires the reporting of HIV positive persons to the Arkansas Department of Health so they can be counseled and their sexual and drug contacts traced, counseled, and offered testing.
- * Assisted the Legislative Committee in composing a bill entitled, "An Act to Create A Crime For Knowingly And Willfully Exposing Another Person To Human Immunodeficiency Virus", to be presented to the Arkansas Legislature in January, 1989.

I wish to thank all the members of the committee and the staff of the Medical Society for their continued interest and efforts that makes this such an exciting and productive committee. All of us on the committee are indebted to Laura Harrison for her uncommon attention to detail and total support of our individual contributions. We also wish to thank Peggy Cryer for her participation in our monthly meetings and particularly her help with the organization of our March 11, 1989 seminar.

The Committee on AIDS and the Arkansas Department of Health continues to work together in a mutually supportive manner. Dr. Elders and her staff are to be commended for their efforts in the AIDS epidemic.

In closing, I want to make a special note and express our thanks to the more than 150 physician volunteers who have held meetings and/or will be involved in our joint effort with the Arkansas Department of Education to take AIDS education to the youth of Arkansas.

Annual Session Committee **Glen F. Baker, M.D., Chairman**

The Annual Session Committee for 1988-1989 was composed as follows: Glen F. Baker, Little Rock, Chairman; Carlos Araoz, Little Rock; Charles H. Rodgers, Little Rock; Walter O'Neal, Little Rock; and F. Patrick Maloney, Little Rock. Ex-officio members were John M. Hestir, DeWitt; James R. Weber, Jacksonville; Mrs. Deno Pappas, Hot Springs, Auxiliary Convention Chairman; and Mrs. William E. Harrison, Little Rock, Auxiliary Convention Assistant Chairman.

The 1988 annual session evaluations indicated that a restructuring of the program was needed to

accomplish the following objectives: 1) shorten the length of the program, 2) appeal to a broader range of physicians, and 3) involve the younger physicians.

It is this committee's belief that these goals will be accomplished during the 1989 convention. The shortened program will be designed around topics of concern and interest to all physicians no matter what their specialty. A dance sponsored by the Young Physicians Committee has been planned for Friday night's entertainment featuring "Private Practice", a popular group of AMS/UAMS medical students.

The committee wishes to thank the AMS staff for planning and coordinating the annual convention.

Budget Committee **Warren M. Douglas, M.D., Chairman**

The Budget Committee submitted the following budget for 1989. The complete budget, as presented to the Council, is available to members upon request.

INCOME	Amount Budgeted
State Society Dues 1989	549961.00
Journal Advertising	53000.00
Booth Income 1989	22500.00
Annual Session	15000.00
AMA Reimbursement	5500.00
Miscellaneous & Rosters	8650.00
Interest Income	55648.00
Specialty Desk	600.00
Continuing Medical Education	500.00
Rent Income	48000.00
AIDS Grant	9774.00
Allocation of Governmental Affairs Department	<u>5000.00</u>
	774133.00

EXPENSE

Salaries	211528.00
Travel & Convention	45000.00
President's Account	3500.00
Taxes	20000.00
Retirement	23270.00
Stationary & Printing	10500.00
Office Supplies & Expenses	18500.00
Telephone & Telegraph	11000.00
Rent	123865.00
Postage	23500.00
Insurance & Bonds	37740.00
Auditing	3500.00
Council & Executive Committee Expense	3000.00

Journal Expense	57250.00
Dues & Subscriptions	3000.00
Gifts & Contributions	2000.00
Auxiliary	2000.00
Legal Services (Retainer)	25200.00
Special Committee	3500.00
Public Relations	3000.00
Miscellaneous Expenses	4000.00
Office Equipment & Furniture	10000.00
Continuing Medical Education	1500.00
Richmond Early Retirement	5820.00
Contract Labor	750.00
AMS Resident & Student Section	4500.00
AIDS Committee	9775.00
Annual Session 1989	<u>45000.00</u>
	712198.00

Department of Governmental Affairs

INCOME	Amount Budgeted
Governmental Affairs Department	<u>187700.00</u>
	187700.00

EXPENSE	
Salaries	67580.00
Retirement	7434.00
Taxes	5700.00
Stationary & Printing	7500.00
Office Supplies, Telephone &	
Miscellaneous Expense	4500.00
Equipment & Furniture	1500.00
Auto, Travel & Meetings	52900.00
Legal Retainer	16800.00
Postage	14000.00
Insurance & Bonds	5520.00
Office Allocation to AMS	<u>5000.00</u>
	188434.00

Committee on Continuing Medical Education Walter O'Neal, M.D., Chairman

The purpose of the Committee on Continuing Medical Education is to provide an intrastate accreditation program to institutions sponsoring CME programs. The result is their ability to provide programs that are acceptable for Category I credit of the AMA's Physicians Recognition Award.

The AMS has been given this authority by the Accreditation Council for Continuing Medical Education (ACCME). The ACCME is a consortium of seven national organizations working in continuing medical education.

The AMS currently accredits 10 organizations around the state. When added to UAMS, which is accredited directly by the ACCME, Category I

credit is available in every area of the state, including AHEC's.

During the past year the Committee has been implementing a number of new policies directed by the ACCME. Among these new policies is a more stringent review procedure, a formal appeals process, and an annual report form for accredited sponsors.

The Committee resurveyed a total of seven sponsors during 1988. Of those surveyed the Committee granted continued accreditation to 2 sponsors for a 4 year period; 1 sponsor for 2 years; 1 for 1 year; and three are still pending final committee review. Three other sponsors are scheduled for review during 1989.

The Chairman would like to personally thank the members of the Committee for their support and efforts. The Committee members contribute a great deal of their time away from home and practice to attend meetings and especially to conduct the on-sight surveys of CME sponsors.

Committee on the Constitution and Bylaws A. S. Koenig, M.D., Chairman

There has been no business referred to the Committee during the year 1988 and, therefore, there have been no meetings.

Report of the Council

J. Larry Lawson, M.D., Chairman

The Council met on July 17, 1988, at the Pleasant Valley Country Club in Little Rock and the following business was transacted:

1. Voted to approve the minutes of the Council meetings during the Annual Session (April 21-24) as written.
2. The minutes of the May 25, 1988 Executive Committee meeting were approved as follows:
 - (1) Discussed a possible format for the AMS Annual Session for 1989.
 - (2) Reviewed a proposal from a travel agency that the Oklahoma Medical Association uses and recommended a trial trip with this agency.
 - (3) Discussed that Dr. Martin Eisele's term as President of MEFFA will expire in August.
 - (4) Reviewed a conceptual outline of the indigent care program modeled after Kentucky's program.
 - (5) Considered appointment of an Indigent

Care Committee to further study the details of how the program should be established.

- (6) Discussed briefly a Young Physicians Committee and indicated that one would be appointed soon.
 - (7) Approved members of the management staff to attend the AAMSE meeting in Nashville.
 - (8) Approved travel for Drs. Weber and Hestir and Mr. Ken LaMastus to attend the AMA Annual Meeting in Chicago in June.
 - (9) Approved travel for Mr. David Wroten and Mr. Lynn Zeno of the AMS staff to attend the AMPAC meeting. It was noted that Mr. Zeno will soon be taking over the responsibility of AMS-PAC.
3. Mrs. W. Ray Jouett discussed the goals of the Auxiliary for 1988-89 and stressed the importance of the Society and Auxiliary working together on projects that will strengthen each organization.
 4. Approved an outline that would restructure the annual session and would reduce the convention from four days to two and one-half days.
 5. William Jones gave a brief update on the activities of the AIDS Committee since its inception and reported on the fall seminar, housing problems being faced by AIDS patients, problems physicians are having in reporting AIDS cases due to the large amount of paperwork, and discussed two grant applications which have been submitted to the Health Department and the Robert Wood Johnson Foundation.
 6. T. E. Townsend reported on the AMA House of Delegates meeting in Chicago and discussed the President's Citation for Service to the Public award.
 7. David Rogers, a member of the Young Physicians Committee, reported on the AMA meeting and discussed the "Basic Science Initiative Program" that will be implemented in the near future.
 8. Reviewed AMS membership statistics.
 9. Voted to continue to retain the group insurance plan for the Society which increased by 35.4%.
 10. Mr. David Wroten reported on the success rate the Councilors have had in recruiting and maintaining AMS members.
 11. Elected Robert Valentine, Jr. to serve on the MSRC Committee representing anesthesiology. Dr. Valentine will replace William

Burgess of Little Rock who was elected during the Annual Session but was not an AMS member.

12. Approved position papers on "Alternate Delivery and Financing Systems" and "Physician Involvement in Government".
13. Reviewed the receipts and disbursements for the period ending June 30, 1988.
14. Reviewed the names of the physicians who were selected to serve on the Young Physicians Committee. They are:
 - District 1: Barry Herman, Jonesboro, child psychiatry
 - District 2: Thomas Benton, Salem, general practice
 - District 3: Ralph Bard, Forrest City, cardiovascular surgery
 - District 4: Anna Ridling, Pine Bluff, family practice
 - District 5: John Alexander, Magnolia, family practice
 - District 6: Jonathan Hoyt, DeQueen, internal medicine
 - District 7: Eugene Still, Hot Springs, emergency medicine
 - District 8: David Harshfield, Little Rock, radiology
 - District 9: David Rogers, Fayetteville, family practice
 - District 10: Joe Cloud, Russellville, ob/gyn
15. The Council asked that Chairman Lawson write Kenny Whitlock of the Department of Human Services and offer the assistance of the Society in making changes and corrections in the Medicaid contract for next year. Dr. Lawson asked for volunteers to serve on the committee.
16. Mr. Mike Mitchell reported that it may be as late as October before a ruling is handed down on the Schaefer Lawsuit.
17. Approved the members of the Indigent Care Committee as follows: Asa Crow, Ray Jouett, Lloyd Langston, John Burge, Harold Hedges, John Hestir, Gilbert Buchanan, and James Armstrong.
18. Reappointed Martin Eisele to the MEFFA. Dr. Eisele's term will expire in August, 1992.
19. Appointed Joe H. Stallings, Jr., to the Pension Plan Trustees. His term will expire in April, 1992.
20. Recommended that Rhys Williams' name be submitted to the Governor for appointment to the Medical Board to fill the unexpired term of Vernon Carter who resigned for health reasons. Dr. Williams will represent the

third congressional district and his term will expire December 31, 1989.

The Council met on Sunday, October 9, 1988, at the Excelsior Hotel in Little Rock and the following business was transacted:

1. Voted to change the wording of Item #20 of the July 17, 1988 Council minutes to read "Upon a motion from Robert Langston and seconded by Ray Jouett, the Council recommends that Rhys Williams' name be submitted to the Governor for appointment to the Arkansas State Medical Board to fill the unexpired term of Vernon Carter upon his resignation for health reasons. Dr. Williams will represent the third congressional district and his term will expire December 31, 1989".
2. Minutes of the Executive Committee Meetings of July 27th, August 24th, August 29th, and September 28th were approved as follows:

July 27, 1988

- (1) Recommended the approval of dues exempt status for C.M.T. Kirkman, E. Frank Reed, Patricia Birum, Vernon H. Carter, and James Morrison. These requests were received too late to consider during the annual session.
- (2) Approved the "Ask the Doctor" program developed by KATV Channel 7 in Little Rock.
- (3) Approved travel for Mrs. Martha Taylor to attend the State Medical Journal Advertising Bureau Conference in West Virginia. Discussed hosting the next conference in two years and approved efforts to bring the conference to Arkansas.
- (4) Dr. Deborah Bryant of the Department of Health discussed efforts being made by the Health Department and Insurance Commission to alleviate some of the problems associated with professional liability as it relates to obstetrical services provided by the Health Department.
- (5) Discussed the Indigent Care Committee. It was noted that an internist needs to be appointed to this committee and suggested that the physician be from the Pine Bluff/southeast Arkansas area.
- (6) Discussed the Medicare program and how it is operated in Indiana and Kentucky.

August 24, 1988

- (1) Discussed the possibility of a doctor-owned state volunteer mutual insurance

company to provide professional liability insurance in Arkansas. Representatives from the Tennessee Medical Association and State Volunteer Mutual Insurance Company expressed an interest in the professional liability environment in Arkansas. Their company was founded in 1974 and is owned and managed by physicians in Tennessee. It is rated A+ by Best.

- (2) An invitation was extended to the Executive Committee to attend a future meeting of the State Volunteer Insurance Company to observe first-hand how the company is managed. It was noted that outside management is hired to run the company but all decisions on underwriting and settlement of claims are made by Tennessee physicians.

August 29, 1988 Conference Call

- (1) Discussion centered around the latest opinion received on the Schaefer Lawsuit. Mr. Mitchell indicated that the Society has approximately two weeks to appeal the decision to the Eighth Circuit Court.
- (2) It was the opinion of those participating in the call that it would not be necessary to make further appeals in the Schaefer case.

September 28, 1988

- (1) Discussed activities and functions of the PRO and stressed the importance of the Society in maintaining their involvement with the AFMC. Several new regulations from HCFA were also discussed.
- (2) Discussed a date to meet again with members of the AFMC to discuss some of the concerns about the regulations and activities of the PRO.
- (3) Approved travel for Mr. Lynn Zeno to attend the socioeconomic seminar in San Antonio, Texas, and for Mr. Ken LaMas-tus to attend the State Medical Association's CEO Conference in Virginia.
3. Mrs. J. Larry Lawson, President-elect of the Auxiliary, reported on the Auxiliary legislative meetings held throughout the state during the month of September.
4. I. Dodd Wilson, Dean of the UAMS, reported on the accomplishments the University has experienced over the last two years and discussed proposed changes for next year. Dr. Terry Yamauchi has accepted the position of Chairman of Continuing Medical Education at UAMS.

5. Approved the proposed CME formal appeals process to be used by those who appeal their denial of CME accreditation status.
6. Received a report from the Membership Benefits Committee on a proposal from Pilgram Travel Agency of Russellville.
7. Approved the budget and membership reports presented by Mr. Ken LaMastus.
8. William Jones, Chairman of the AIDS Committee, gave an update on the activities of his committee and reported that Drs. Harold Hedges, James Mason, and Robert Searcy received "Excellence in Health Care" awards from the AIDS Foundation of Arkansas. The \$14,662 grant through the Health Department was approved and the money will be used to continue programs currently underway and to fund a program that will educate teachers throughout Arkansas on AIDS. Dr. Jones also reported that the next AIDS seminar will be March 11, 1989, at the Hot Springs Sheraton, featuring Col. Neal Boswell as speaker.
9. Mr. Mike Mitchell reported on the final ruling of the Schaefer Lawsuit and presented the Council with an outline of the different rulings and reasonings.
10. Mr. Mitchell discussed the Health Care Quality Immunity Act mandated to take effect in October 1989.
11. Received a report on the Tennessee Medical Association and their State Volunteer Mutual Insurance Company.
12. Approved the deletion of the words "within the last five to ten years" from the fourth paragraph of the position paper on AIDS.
13. Received a report from Dr. Sandra Young concerning a project she has proposed to the Auxiliary. The project would involve junior and senior high schools in contests that would include writing, directing, and recording public service videos on the hazards of DWI.
14. Approved the feasibility study on a project showing the dangers of DWI the Auxiliary is proposing for junior and senior high school students.
15. Announced December 11th would be the next Council meeting. The 1989 budget would be presented.
16. Dr. Weber reported that the Insurance Commission approved a 12% rate increase for St. Paul Insurance Company instead of the 18.4% requested.

The Council met on December 11, 1988, and the following business was transacted:

1. Chairman Lawson announced the appointment of Rhys Williams to fill the unexpired term of Vernon Carter. Dr. Williams' term will expire December 31, 1989.
2. Approved the minutes of the October 9, 1988, Council meeting as written.
3. Approved the minutes of the November 23, 1988, Executive Committee meeting as follows:
 - (1) Heard a presentation from W. W. Workman, Deborah Bryant, Frank Miller, and Robert Arrington concerning regionalization of perinatal health care in Arkansas.
 - (2) Heard a presentation by Chairman Lawson concerning the problems of reimbursement under the Medicare program in rural hospitals. Members of the AARP were in attendance. The PRO was also discussed as one of the problems that was causing the decline in admissions to rural hospitals.
4. Mrs. W. Ray Jouett, President of the AMS Auxiliary, reported on the Auxiliary's involvement in organizing a statewide junior and senior high school video contest on the hazards of DWI.
5. Mr. Robert Shoptaw of Arkansas Blue Cross Blue Shield, discussed the reasons for the increases in health insurance premiums.
6. William Jones reported on the involvement of forty medical students who have been participating in educating junior and high school students throughout the state on the disease AIDS. Dr. Jones also reported on the AIDS Committee/Department of Education project which would educate teachers throughout the state on AIDS.
7. John Hestir reported on the State Volunteer Mutual Insurance Company which will begin writing coverage in 1989.
8. Approved the amendments to the AMS Pension Plan to meet IRS requirements.
9. Received a report from Milton Deneke on the joint AMS/KATV public education television program called "Health Calls". Dr. Deneke encouraged members to contact hospitals and clinics in their area for further funding of the project.
10. Received a report from Mr. Mike Mitchell on the Health Care Quality Improvement Act. Mr. Mitchell recommended that the AMS wait until October 1989 to re-assess the act.
11. Received a report from Asa Crow on the Indigent Care enrollment questionnaire that

was mailed to AMS and nonmember physicians.

12. James Weber discussed various issues to be proposed in the 1989 General Assembly. The Council approved a change in the proposed rape examination payment legislation. The new proposal will require direct reimbursement to the physician instead of reimbursement through the medical facility.
13. Endorsed in concept the health related section of Governor Clinton's 1989 legislative package with the recommendation that it be partially funded by a five-cent per package tax on cigarettes.
14. Re-appointed Warren Douglas to the Budget Committee. Dr. Douglas' appointment will expire December 31, 1992.
15. Received a report from William Jones on his recent trip to the American Academy of Dermatology where he received updated information on the HRBVS study.
16. The Council voted to support a resolution from Washington County Medical Society expressing their disappointment with Blue Cross and the contract they entered into with Arkansas Eye Associates.
17. The Council went into executive session to discuss the 1989 budget. (Minutes to the executive session are onfile in the AMS office).

Report of the Executive Vice President Ken LaMastus, CAE

The measure of time is relative. The longer one has lived the more rapidly a given period of time seems to pass. This comes with experience in one's job or in life. When one has only lived a few years, a period of one year is a long stretch of time. When one has experienced a number of years, one single year seems to be a relatively short period of time. Perhaps my age and experience in the Medical Society has caused me to feel that 1988 passed rather quickly.

The year 1988 saw the passage of the second full year of the Arkansas Medical Society office being located in the new building in Little Rock. Currently the building is 100% leased. This is remarkable considering the competition in office rental in the Little Rock area. This has obviously caused the building owners concern about continuing to maintain a high occupancy rate.

The Medical Society staff as well as other tenants in the building have a high regard for the building and are pleased with its location and amenities.

Many of the Arkansas Medical Society functions tend to move in cycles. We have some functions that take place on a monthly basis, some like the annual convention come but once a year, while the function of the Legislative Session is one that occurs every two years. With the completion of this legislative session the new staff in Little Rock will have experienced at least all the recurring cycles for the second time.

The Arkansas Medical Society entered 1988 in a better than anticipated financial condition. This was a result of 5% more revenue than anticipated, in large part due to higher membership than anticipated. Expenses maintained at or about the level budgeted.

Some of our objectives for 1988 were to begin the development of a long range plan to chart the direction of the Arkansas Medical Society over the next few years. This will culminate with the Annual Session in April 1989 when a long range plan will be presented to the House of Delegates for their consideration. The process has involved a large number of physicians in all geographic areas of the state, representing all fields of medicine, and included representatives from the newly formed Young Physicians Committee.

The end product of the Long Range Planning Committee's work is the result of numerous hours spent reviewing all aspects of the Arkansas Medical Society, its functions and the environment in which it currently operates and anticipates operating in the future. To do a long range plan that involves a large number of people is a large and tedious activity. The members of the Long Range Planning Committee and Subcommittees are to be commended for their efforts toward the completion of this task.

The decision made in 1987 to do the *Journal of the Arkansas Medical Society* on desktop publishing has turned out to be excellent. It has allowed our staff and the editorial board to make changes in the Journal and are continuing to improve those aspects of the Journal that are valuable to Arkansas Medical Society members. My compliments to David Wroten and Martha Taylor for their efforts.

Several of the committees of the Arkansas Medical Society should be mentioned for their work and their members' commitment. The AIDS Committee, chaired by Dr. Bill Jones, continued this year to function and make the Arkansas Medical Society have a strong voice in AIDS education, both to professionals and the public. This committee has also enabled the physicians of Arkansas to have a strong voice in regulatory matters and legislation pertaining to the AIDS problem within the State of Arkansas.

Without mentioning many individual committees, it is worthwhile to point out there have been more meetings attended by larger numbers of physicians this past year than any in my previous twelve years with the Medical Society. This is especially true of the Executive Committee which has continued to have even more meetings taking more of their time away from their family and practice and devoting it to the Arkansas Medical Society and the good of the physicians of the state.

One new committee that was appointed this year by Dr. John Hestir was the one organized as a liaison with PRO organization, the Arkansas Foundation for Medical Care. The committee was formed at the invitation of the Arkansas Foundation for Medical Care but also in response to a large number of physicians who were highly critical of the review process being carried on by the PRO.

It seems that the problems facing medicine are centered around the activities of government and other parties who pay for part of the cost of healthcare. Efforts by different groups to contain costs continually present problems for the practicing physician who feels that his primary loyalty and obligation is to the people he serves and not to some government agency or insurance company. It would seem that providing quality, accessible medical care is not always consistent with what those outside of medicine feel are reasonable costs. These arguments and battles will continue with the federal government, whose problems of cost containment not only cover these areas of medicine, but also with the federal deficit in general. There is a problem on the state level with the Medicaid program and it shows itself in increasing activity by insurance companies and other third party payors who want a voice in how medicine is practiced.

We were very fortunate this past year to bring on board a new staff person in the area of governmental affairs who is also knowledgeable in the insurance field. Mr. Lynn Zeno joined our staff in December of 1987 and has done an outstanding job at representing physicians this past year. He has encouraged physicians to become more involved with political and regulatory processes. As a result of his efforts, the largest carrier of professional liability insurance in the state of Arkansas had its request for rate increase on premiums reduced. That savings alone to the Arkansas physicians insured by this one company was over \$1 million per year in premiums.

Another commendable step for the Arkansas Medical Society is in the area of indigent care. It is very possible that in the year 1989 a system will be

in place that will allow those people who are below the poverty level and have no insurance some access to the health care delivery system. Although it will not be a perfect system, it will allow someone who needs to see a physician the ability to do so at no charge for the first visit.

One of the things this program, "Arkansas Physicians Care," will prove is that the physicians of Arkansas have been taking care of the majority of these people for years. The program was developed to give access to those people who feel they do not have access to medical care. It would seem that such a program is the highest goal of medicine and will prove that the physicians of Arkansas do care and do want a voice in medical care delivery in the State of Arkansas.

Committee on Hospitals

G. Max Thorn, M.D., Chairman

There was no activity from the Committee on Hospitals during the last year.

Indigent Care Committee

Asa A. Crow, M.D., Chairman

The President of the Arkansas Medical Society appointed an Indigent Care Committee earlier this year. Members of this committee are Lloyd Langston, John P. Burge, Harold H. Hedges, John M. Hestir, Ishmael S. Reed, W. Ray Jouett, Gilbert Buchanan, James Armstrong, and myself, as chairman.

Over the ensuing months, we have had several meetings concerning the problem of indigent care in the state. We reviewed how the Kentucky Medical Association was involved in a plan to help alleviate some of its problems. I made a presentation to the Council on April 21, 1988, and received their approval to proceed with implementation of a similar program in this state. Prior to this, several physicians had discussed ways they might volunteer their services to help treat people who were low-income, not eligible for Medicaid, and had no insurance.

The plan was referred to the House of Delegates at the winter meeting. Attending our House of Delegates meeting were Drs. Donald Martin and Nelson Rue, president and president-elect of the Kentucky Medical Association. They explained their program which has been used in Kentucky since 1985. Time was then allowed for the members of the House of Delegates to ask questions about the program.

Following this discussion, a motion was made that the House of Delegates approve the Arkansas Physicians Care Program (modeled after the Kentucky Physicians Care Program). The Indigent Care Committee would then have the responsibility of recruiting enough physicians to participate in this program so as to guarantee its success. No public announcement of the program was to be made until the program is in place. This motion of the House of Delegates passed unanimously. Since that time, the Governor's Indigent Care Task Force has approved the funding of the program.

We have since mailed out requests for volunteers to help implement this program. It should be mentioned that at the writing of this report, we have received from our initial mailout approximately 500 responses from Arkansas physicians who have volunteered for the program. This includes primary and nonprimary care physicians as well as members and nonmembers.

At its January 8th meeting the Committee further recommended that we put the operation of the program in force as soon as we receive information from volunteers totaling 750 people, of which 350 would be primary care physicians.

Also at the January 8th meeting the Articles of Incorporation and Bylaws that would establish the Arkansas Access to Care (AHCAF) were reviewed. These papers were approved with minor changes and will be filed by the AMS attorney in a few days. Upon receiving the Charter of Incorporation, the members of the Arkansas Indigent Care Committee will become members of the foundation, as so appointed by Dr. Hestir, President of the Arkansas Medical Society. This complies with the articles incorporated and the bylaws of the new foundation.

Therefore, an election was held to determine the new officers of the AHCAF. The new officers are W. Ray Jouett, President; Lloyd Langston, Vice-President; and Harold Hedges, Secretary/Treasurer.

Our headquarters office, as well as members of the committee, have been working with various other health care organizations in the state asking them to join with us in establishing this program. The Arkansas Hospital Association Board of Directors has agreed to work with the program if we obtain enough physicians to make the plan viable. The Arkansas Dental Association is currently polling their members to join the program.

At this time, the pharmacists in Arkansas have not agreed to work with the program. Contact has been made with the Pharmaceutical Manufacturers Association and the National Association of

Drug Manufacturers. Individual talks with officials of various drug companies indicate that many of the drug companies will be more than happy to provide additional medications they might have for treatment of the indigent.

The committee is very hopeful that this project will be up and running in the near future. We hope that you, as an individual physician, will care enough about the people who are unfortunate enough to not have the funds necessary to pay for medical care and join this effort.

I would like to express my appreciation to the members of the Indigent Care Committee who have had several meetings and spent many hours working on this program. Since this was an adhoc committee and the function will be assumed by the Board of the AHCAF, this committee will cease to function.

Committee on Insurance

Eugene F. Still, II, M.D., Chairman

The Insurance Committee this year continues to meet its charge of developing a meaningful and competitive insurance program that can be offered to the Society membership as a whole.

In the month since our last report, the disability policies have been marketed quite strongly and the response from the membership is beyond what was expected and predicted.

We have continued to allow other companies to submit policies to us in an ongoing effort to assure that the policy we offer the Society is of the highest quality considering the benefit definition of the disability premiums and liability of the companies considered. Mr. Foss and his associate have done an excellent job in making sure that the membership is aware of these new benefits and, in addition, has secured renewal with our new company for all those doctors who are at risk of losing their disability insurance because of cancellation by our former carrying company.

We are making investigative inroads into life and health insurance as well as possible vehicles which might be advantageous to our membership for purposes of additional retirement funding. If and when we find a vehicle which seems satisfactory for these additional pursuits, we will interview and investigate thoroughly and present our findings to the Council and outside consultants before offering them to our membership.

Trustees of the Pension Plan

Glen F. Baker, M.D., Chairman

Members of the Pension Plan met by conference call at 11:00 a.m. on Tuesday, December 6th.

Participating in the conference call were Drs. Glen Baker and James F. Kyser. The purpose of the conference call was to review the amendment to the Pension Plan as presented by the Society's law firm. The amendments to the plan made no substantial changes, but were required by the IRS to keep the plan in compliance.

The other item reviewed was the third-quarter earnings report on the Pension Plan; rate of return was 8.34%. Dr. Baker indicated that we might want to review this with the managers at Worthen Bank.

These changes were recommended to the Council at their meeting December 11th.

Physicians' Health Committee **Joe L. Marlindale, M.D., Chairman**

The Physicians' Health Committee was reorganized in 1987 as the Arkansas Medical Society Impaired Physicians Committee. Upon approval by the Council, it was renamed the Physicians' Health Committee.

We have been active in educating the state's doctors and hospitals concerning the problems of chemical dependency among our peers. We have also worked with the Medical Auxiliary in setting up their support program. This educational program has been very successful and I feel that we have accomplished a great deal in one short year. We still have a long way to go as far as reporting is concerned and we hope for a closer working relationship with the Medical Board in the near future. We feel that our Committee is a viable alternate to loss of licensure but physicians and hospitals need to know of our availability and desire to work with chemically dependent physicians.

We are directly monitoring the recovery of thirteen physicians and we have had many others who have sought help through Alcoholics Anonymous because of encouragement from committee members and other physicians who are in recovery. There is a support group of physicians which meets monthly in Little Rock. This is not a function of the committee but is a very definite adjunct to our program.

Overall, I feel that we have been very successful in our first year and, hopefully, as we do more education, we will be able to serve many more of our colleagues.

Physician-Nurse Joint Practice Committee **Charles F. Wilkins, Jr., M.D.**

The Physician-Nurse Joint Practice Committee has been relegated to inactive status because it

appeared to be accomplishing nothing. After I attended a meeting in Atlanta and discussed the problem with several nurses around the state, I asked that it be reconstituted. Again, it proved to be an unworkable committee and it has never accomplished anything and, in fact, I did request that the Council recommend its abolition and I repeat this suggestion.

Arkansas Medical Society Political Action Committee **John Crenshaw, M.D.**

The Arkansas Medical Society Political Action Committee (AMSPAC) has had another very good year. Over 380 AMS members and spouses contributed to PAC during 1988.

Of particular interest was the increase in sustaining members (contributors of \$99 or more) and Auxiliary members. Sustaining members accounted for over 65% of all PAC contributors which represents about a 30% increase over previous years. For the first time, a special solicitation to physicians' spouses was utilized to try and increase Auxiliary participation in PAC. The effort was not as successful as desired but 52 spouses responded by making contributions and half of those were sustaining members.

During the past year several events have occurred that illustrate the impact that our increased participation has had in the legislative arena. In February, Congressman Beryl Anthony hosted a special program to allow physicians an opportunity to discuss their problems and give him suggestions on improving the Medicare program. The AMS worked closely with Mr. Anthony to put the program together. The results: 140 physicians attended the meeting on a Wednesday afternoon in Hot Springs. During the remainder of the year Mr. Anthony and/or his staff met on several occasions with physicians and AMS staff to discuss their concerns. Because of Mr. Anthony's position on the House Ways and Means Subcommittee on Health, our continuing efforts to improve our relationship with him will hopefully result in giving physicians more of a voice in future Medicare issues.

Another product of increased participation is evidenced by the efforts of AMS physicians in the Third Congressional District. During the summer months physicians showed their support for Congressman Hammerschmidt by sponsoring not one, but three fundraisers for him. These were held in Harrison, Fort Smith and Fayetteville. This is an activity we would like to encourage in all areas of the state. It not only helps fund the campaign, but

also helps develop a relationship between the Congressman and his physician constituents.

In the summer of 1988 AMS staff members David Wroten and Lynn Zeno, attended the AMPAC Executives Conference in Phoenix. This meeting, held every two years, brings together the PAC staffs from all state medical societies to discuss items of concern to all of us.

AMSPAC membership gains during the last couple of years were recognized at the 1988 AMS Annual Session. AMPAC Board member Clifford Montgomery, M.D., of Texas, was on hand to present AMSPAC with an award for outstanding membership gains. The award, a plaque, is now on display at AMS headquarters.

On behalf of the Board of Directors of AMSPAC, I would like to thank the AMS members and their spouses for supporting PAC. Their participation in the political process can and does make a difference,

It has been a pleasure serving as your PAC Chairman, and I encourage all of you to *get involved*.

Committee on Position Papers

James M. Kolb, Jr., M.D., Chairman

The members of the Committee on Position Papers are James M. Kolb, Jr., Russellville, Chairman; Lloyd Langston, Pine Bluff; Paul Cornell, Little Rock; R. Wendell Ross, Fort Smith; S. Berry Thompson, Little Rock; George W. Warren, Smackover; and W. Payton Kolb, Little Rock.

During the year 1988 the following position papers were updated by the Committee and approved by the Council: 1) "Alternate Delivery and Financing Systems"; 2) "Acquired Immunodeficiency Syndrome (AIDS)"; 3) "Physicians' Involvement in Government"; and 4) "The Impaired Physician."

After reviewing the position paper on "Freedom of Choice" the committee decided not to make any changes.

Other position papers reviewed by the committee last year were "Professional Advertising by Physicians" and "The Supply and Distribution of Physicians."

The Committee on Position Papers also developed a paper on "Indigent Care" that was approved by the Council.

I would like to thank all the members of this committee and the AMS staff for the dedication and hard work. I would also like to take this opportunity to thank the Committee on AIDS, chaired by Dr. William N. Jones, for their expertise

in updating the position paper on "Acquired Immunodeficiency Syndrome (AIDS)".

Alternate Delivery and Financing Systems *General Information*

Alternate Delivery and Financing Systems (ADFS's) are methods of delivering and financing health care other than traditional fee-for-service. The three most common types of systems are Health Maintenance Organizations (HMO's), Individual Practice Associations (IPA's), and Preferred Provider Organizations (PPO's). All of these terms are used to describe ADFS's, and any single system may have characteristics of all three.

The various methods of delivering and financing health care may be viewed as an array of systems with one extreme being private practice fee-for-service and the other extreme being a staff model Health Maintenance Organization where the physician is a salaried employee. In the traditional "fee-for-service" system, the patient receives medical care from his choice of providers in their respective offices. The patient and/or his insurance pays the physician for the costs associated with the services provided. In the HMO system, the patient *must* accept one of the salaried physicians at the HMO facility and has little or no choice of physicians. The patient pays a set fee per month for which he receives a pre-designated range of services; the risks associated with the costs of those services is borne by the HMO. With these two extremes, the other Alternate Delivery and Financing Systems then fall somewhere between.

The various Alternate Delivery and Financing Systems may be organized or owned by various groups including corporations (both profit and nonprofit), physicians, hospitals, or other groups.

A common characteristic of most non-traditional or Alternate Delivery and Financing Systems is that a contract of some form exists between the involved parties - patient, organization (HMO, IPA, etc.), and the physician.

The HMO type organization agrees to provide health care service to a patient based upon an annual or monthly fee paid by the individual or the individual's employer. Services may be provided in a central HMO facility or a private office setting under contract with the HMO. The physician, thus, is either an employee of the HMO or agrees to provide services to patients on a contracted basis. In the latter case, the HMO and the physician are at risk as to the cost of care provided.

An Individual Practice Association (IPA) is usually an organization of physicians who agree to provide services to people who enroll and pay a set monthly fee. Services are provided in the physi-

Contributors to the Arkansas Medical Society Political Action Committee (1988)

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* John M. Hestir
* Carl E. Northcutt
* Hoy B. Speer, Jr.
* Marolyn N. Speer

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* Daniel P. Chock
* James C. Dunbar
* Phillip R. Hardin
* Stacey M. Johnson
* Mrs. Stacey M. Johnson
* Robert L. Kerr
* Mrs. Robert L. Kerr
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Crawford

Millard C. Edds

Crittenden

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* Mrs. Glen E. Bryant

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* Trent Pierce
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* Steve P. Schoettle
* Mrs. Steve P. Schoettle
* Mrs. C. Herbert Taylor, Jr.

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Dallas

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* Mrs. Don G. Howard

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* Contributed \$100.00 or
 more

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 1 (800) 542-1058 or (501) 224-8967*

cian's own office setting and the contractual arrangement exists between the IPA and the physicians delivering services. The IPA is similar to the HMO in that the number of enrollees determines the income of the organization.

A common characteristic of an IPA is that physicians are paid on a unit of service basis with a portion of that fee being placed in a "risk pool" and if the total cost of delivering care to the group of individuals is equal to or less than the collected enrollment fees, the money from the "risk pool" is distributed to the participating physicians. When the cost of providing care exceeds that allocated, the physicians do not receive any returns from the "risk pool. This method of financing and delivering health care places greater responsibility for the cost of care on the individual physicians and the organization.

The newest form of Alternate Delivery and Financing Systems and the most rapidly growing in number during the first half of the 80's is the Preferred Provider Organization (PPO's). A group of health care providers (the PPO) contracts with third-party payors or insurers to provide services on a discounted basis to the groups that it insures. Services are normally provided in the physician's private office with patients free to select among participating physicians or other non-PPO physicians. However, by choosing the PPO physician, the deductible and co-payment is usually waived.

The various forms of Alternate Delivery and Financing Systems have been developed as a method of reducing the increasing cost of health care. From the point of view of the provider of services, this system is viewed primarily as a means of assuring themselves of an adequate volume of patients.

To be successful, the ADFS's must utilize a very strict system for reviewing quality of care and utilization of health care services, especially hospital services.

Laws and Regulations

With rare exceptions, any Alternate Delivery and Financing System would be subject to various Arkansas laws and regulations that apply to health insurance companies. Any group of physicians or any other groups considering organizing, investing in, or becoming associated with an ADFS should receive assurance of compliance with laws and regulations administered by the Arkansas State Insurance Department.

Arkansas Medical Society Position

The Arkansas Medical Society recommends a continuous review of the models of alternate delivery systems.

The Arkansas Medical Society further recommends that any system of financing health care involving payment for services to be provided at some future time should be regulated by the Arkansas State Insurance Department. Such regulation would assure individuals or employers as well as health care providers that money paid for future health care is adequate to insure that the ADFS remain solvent.

Approved by the Committee on Position Papers January 1984.

Approved by the Council March 1984.

Approved by the House of Delegates April 1984.

Updated by the Committee on Position Papers February 1988.

Approved by the Council July 1988.

Acquired Immunodeficiency Syndrome (AIDS)

General Information

The Arkansas Medical Society recognizes AIDS as a crucial public health problem requiring a sensitive, intelligent, effective response. Physicians should assume a leadership role in the prevention and control of this disease by educating themselves, their patients, and the public.

AIDS is an infectious disease but is not transmitted through casual contact. Persons with AIDS and those infected with the virus should not be treated unfairly or suffer from arbitrary or irrational discrimination.

Testing for the AIDS virus should be readily available to all who want to be tested. As a matter of medical judgment, physicians should encourage voluntary HIV testing for individuals whose history or clinical status warrants testing.

Before testing, the patient should be counseled on effective behavior to avoid risk of AIDS for themselves and others. Patients found to be seropositive should be counseled on responsible behavior to prevent the spread of the disease, strategies for health protection with a compromised immune system, and the necessity of alerting sexual contacts regarding their possible infection by the AIDS virus. Certain high risk groups should be regularly tested, with a right to informed consent and to refuse the test. These include patients at sexually transmitted disease clinics and drug clinics; first trimester pregnant women in high risk AIDS areas; those seeking family planning from high incident areas or who engaged in high risk behavior. Testing for the AIDS virus is mandatory for donors of blood and blood fractions, organs and other tissues intended for transplantation; as should be for donors of semen or ova; for immigrants to the United States; for inmates in

federal and state prisons; and for military personnel.

The confidentiality of the doctor-patient relationship is vitally important but not absolute. There must be a judicious balance between the well being of the patient and the protection of the public health. Access to patient information should be limited to health care personnel who need access to assist the patient or to protect the health of others closely associated with the patient. Physicians who have reason to believe that there is an unsuspecting sexual partner of an infected individual should be encouraged to inform public health authorities. The duty to warn the unsuspecting sexual partner should then reside with the public health authorities as well as the infected person and not in the physician.

Regulations

Arkansas Department of Health regulations in the area of Communicable Disease require:

1. HIV positivity has become a reportable condition.
2. If a person who is HIV positive intentionally spreads the virus, there are certain actions the health department can take.
3. A toe tag must be attached to a dead person who is infectious for a blood-borne infection.
4. Anything you transfuse or transplant into a patient from another human must be negative for hepatitis and HIV.
5. If an emergency response person is exposed to body fluids, you are required to tell the health department if the patient has any known infection in that body fluid.

A copy of the Arkansas Physician Bulletin with the complete regulations can be obtained by contacting Dr. Thomas McChesney at 661-2597.

HIV Positivity

On June 15, 1988, HIV antigen or antibody positivity became reportable by name and address. You should report this condition the same way as other reportable diseases. Call 1-800-482-8888 or mail the report to: J. P. Lofgren, M.D., Medical Director, AIDS/STD Program, Arkansas Department of Health, 4815 West Markham, Little Rock, Arkansas 72205.

Intentional Spreaders of HIV

If you are aware that a person who knows that he/she is HIV positive is still engaging in conduct (such as sex without the use of condoms or sharing needles) which is likely to cause the transmission of HIV, you may report this to the health department. The director of the Health Department may

wish to order the patient to cease and desist such conduct. If the patient continues, the Health Department may turn the case over to the prosecuting attorney in the county of residence of the patient.

Toe Tag

If your patient is infectious for HIV, Hepatitis B, Hepatitis non-A, non-B, Tularemia, Rabies, or Plague at the time of death, you are required to attach a red tag to the big toe of the right foot. This tag does not need to state the infectious disease, but indicates to the funeral home that the blood is infectious.

Transfusion/Transplantation

No blood or blood products can be transfused into a patient unless found to be non-infectious for Hepatitis B virus or HIV. Also, you can not transplant any tissue or organ unless the donor has been tested and found to be non-infectious for Hepatitis B or HIV.

Emergency Response

If an emergency response employee (ERE) is exposed to the body fluid of the patient, they may call the Health Department. If the type of exposure could have spread an infectious agent, the Health Department will call the patient's physician and the physician is obligated to state whether the patient is infectious for anything that could spread through this type of exposure. The Health Department will then give recommendations back to the ERE. Because of confidentiality, the Health Department will not tell the ERE the information received from the physician (though often the ERE will be able to guess from the recommendations that he receives). The ERE is requested to share these recommendations only with those who need to know.

If you know that an ERE was exposed to an infection, and you later discover that the patient was probably infectious, you are to call the Health Department.

If your patient is being transported and you are aware that the patient is infectious, you are required to inform the ERE. You do not need to state the specific disease, but only what body fluid is infectious, so that the ERE can take extra precautions.

Updated by the Committee on Position Papers July 1988. Approved by the Council October 1988.

Physician Involvement in Government *General Information*

Each year governmental intervention and regulation becomes a greater factor in the physi-

cian's practice of medicine. Physicians have become victims of state and national legislatures, governmental regulatory agencies, and third-party entities approved and regulated by the government. Lack of involvement by individual physicians has resulted in persons outside the medical community dictating the rules, regulations, and laws that we must adhere to. The burden of over-regulation has resulted in increasing the cost of medical care. In addition, government authorization has allowed other less qualified health-related professions to infringe upon the medical services that only a qualified medical doctor should provide.

Principles of Fact

Political awareness and involvement are two significant keys to the future physicians' medical practice. It is a *fact* that participation in the political process can and does make a difference. The medical community must not be intimidated by the bureaucracy due to its size and hierarchical structure. Physicians should never consider politics distasteful...but recognize that it is the process of governing. Physicians must become more responsible for their own concerns.

Applicable Laws and Regulations

Because democracy is a form of government based on the conviction that all citizens have the right to participate in the political process, there are few laws governing an individual's methods of involvement. There are, however, laws related to the monetary participation by individuals and organizations concerning campaign contributions. (Copies of these laws are on file in the Society office.)

Arkansas Medical Society Position

The Arkansas Medical Society believes that an informed, educated, and involved member will determine the success enjoyed in the governmental arena. To this end, our efforts will be directed to:

Explain to the membership how the legislative system effects the practice of medicine. Furnish a guideline of what the political process is all about and the role that physicians must play.

Involving the membership in campaign participation, constituent communication and lobbying techniques.

Establishing a grass-roots communication network for responding to legislative concerns.

Increasing financial participation in the AMS-PAC and State Legislative Fund and communicating to the membership the needs for these funds.

Utilizing a lobbyist to monitor medical issues; work directly with the legislators and pertinent committees; and express our concerns in a clear, concise, and professional manner.

Updated by the Committee on Position Papers February 1988. Approved by the Council July 1988

The Impaired Physician

General Information

The impaired physician is one who is no longer able to effectively practice medicine because of the development of a physical, mental, or emotional problem. This includes the development of a dependency on alcohol and/or other chemical substances as the cause of the impairment.

The development of an impairment in a physician adversely affects the individual, his or her patients, the family, and the entire community. With the shortage of physicians in Arkansas the problem can be very serious to the area served by the physician.

Studies of the problem indicate that, percent-age-wise, the problem is no more severe than in the general population. The medical profession is concerned with the recognition and treatment of all impaired individuals. The impaired physician, however, presents a unique challenge due to the nature and responsibility of his or her work. The investment in the physician's education and training and the need for his or her services, particularly in the rural areas, makes it imperative that there be rapid recognition and effective treatment to enable the physician to return to practice.

Emotional strain, in addition to many other factors, is responsible for the development of mental and emotional impairments in individuals. Recognition and treatment can be very effective in relieving an individual of his or her problem and the return to effective life.

Applicable Laws and Regulations

The Arkansas State Medical Board has the authority to regulate the practice of medicine in Arkansas and with this responsibility it takes action in regard to the individual who can no longer effectively practice medicine. The Board has the authority to investigate, charge, and hold hearings to determine the problem that exists. The Board can restrict, issue a warning, suspend, or revoke a license. The Board has functioned well in its responsibility and has helped many physicians to recover and return to effective practice. The Board works closely with the appropriate federal

agencies in regard to any laws or regulations pertaining to this problem.

Arkansas Medical Society Position

The Arkansas Medical Society recognizes that the public has the right to know of this problem and its efforts to correct it. In general, the public recognizes that physicians work under stress and pressure and are also subject to the same stresses as the general public. The Arkansas Medical Society working with the public, as it has in the past, can reduce some of these stresses by education as to health needs and health habits.

The Arkansas Medical Society and the American Medical Association are working intensively to recognize and treat the impaired physician. The success rate in returning physicians to active, effective service is excellent.

The Arkansas Medical Society is desirous that the public be aware of its concern over the problem and its intent to do everything possible to protect the public's access to quality medical care. The public develops a rapport with its physicians and becomes concerned when it recognizes a physician has a problem. The Arkansas Medical Society assures the public it will do everything possible to restore the physician back to active, effective practice.

The Arkansas Medical Society also recognizes the concern of the physician and his or her family as to his or her own health and desire to practice quality medicine. The Arkansas Medical Society will do everything it can to help a physician recover from an impairment and return to practice.

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Updated by the Committee on Position Papers February 1988. Approved by the Council October 1988.*

Indigent Care

General Information

Historically, medicine has attempted to provide care to people, even if they did not have funds necessary for payment or service. Today, with the increase in technology on the cost of medical care, the cost of caring for the indigent is more acute.

The Medicare program, in general, provides some means of payment for those over the age 65, permanently disabled, and those with particular types of conditions such as end-stage renal disease. However, even the payment of the deductible and the co-insurance under Medicare can be a problem for many of our citizens. Medicaid in some cases does pay a portion of the Medicare deductible and co-insurance which assists in alleviating some of the problem.

It is estimated that slightly less than one-quarter of the people in the state of Arkansas have an income below the federal guidelines of poverty. Of this portion, approximately one-third of the lowest income are covered under the Medicaid program.

This demonstrates that a significant portion of our population who live below the poverty level do not qualify for low income assistance through the Medicaid program.

Arkansas is a rural state with a large portion of its work force connected to agriculture and service industries. Historically, these two groups show the highest number without employer-provided insurance coverage. Persons in these sectors of the economy tend to be among the lowest paid.

Arkansas Medical Society Position

The Arkansas Medical Society recognizes that Arkansas is a low per capita income state and Arkansas physicians are especially mindful that there are those in our state who have problems paying for needed medical care.

The Arkansas Medical Society encourages physicians to devote part of their practice to providing care of those without the ability to pay for needed services.

Approved by the Committee on Position Papers July 1988. Approved by the Council October 1988.

Public Health Committee

Don Howard, M.D., Chairman

The Committee on Public Health met on January 9, 1989. Members present were Drs. Don Howard, Chairman; A. Stuart Fitzhugh; and Alan Storeygard. The committee recommended the following:

1. All age groups utilize and wear helmets during their operation of all ATV and all other recreational vehicles regardless of age.
2. That education be compassed with regulations for all ATV and recreational vehicles operations.
3. There should be more educational emphasis on the complications and adverse effects of anabolic steroids. The availability of such medications should be by prescription only.
4. HIB vaccine should be utilized in all susceptible individuals and is recommended that the vaccine be administered by the Department of Public Health in their Immunization Clinics when funding is available.

5. All health care services emphasize and prohibit smoking on their premises.
6. The utilization of seatbelts be made a high priority in all areas of Arkansas and that more education be provided to the state in the form of public education as well as public meetings.

I would like to personally thank all members of the Public Health Committee who have worked untiringly during the year to promote all educational and administrative activities of the Public Health Committee.

First Councilor District
Professional Relations Committee
Bascom P. Raney, M.D., Chairman

There has been no activity for the year 1988 relative to the First District of the Professional Relations Committee.

Second Councilor District
Professional Relations Committee
Clarence W. Jackson, M.D., Chairman

There are no activities to report for the Second Councilor District of the Professional Relations Committee for the period beginning April 1988.

Sixth Councilor District
Professional Relations Committee
Herbert B. Wren, M.D., Chairman

There have been no activities in regard to the Sixth Councilor District during the period of April 1988 to the present time.

Seventh Councilor District
Professional Relations Committee
Bruce A. White, M.D., Chairman

The Professional Relations Committee, Seventh Councilor District, received only one complaint about patient care during the period from April 1988 through December 1988. This involved questions from the surviving mother of a patient who had died while hospitalized. This lady had questions concerning the appropriateness of the care her son received and the appropriateness of the diagnosis which was made.

On review of the medical records from this case which we received, the Professional Relations

Committee ascertained that there was no evidence of improper physician activity in this case but that there seemed to be more of a misunderstanding between this lady and her son's physicians which could, perhaps, have been cleared with improved communications.

No action was taken by the Committee on this, as no inappropriate physician activity was found to be present.

Ninth Councilor District
Professional Relations Committee
Charles A. Ledbetter, M.D., Chairman

The Professional Relations Committee, Ninth Councilor District, responded to two complaints in the reporting period of 1988.

One complaint was against the office of a county medical society in not granting locum tenens privileges for a United States Army physician wishing to work in a local freestanding clinic. It was the Committee's opinion that the primary problem with this incident was a failure to properly communicate among the professions involved. The complaint was resolved.

The second complaint was directed to a general surgeon involving a patient having a negative mammogram and, nine months later, having a repeat mammogram that demonstrated carcinoma of the breast. The complaint was directed at the surgeon's failure to biopsy the breast after the first mammogram. This complaint was not resolved to the satisfaction of the complainant who will pursue it in other avenues.

Tenth Councilor District
Professional Relations Committee
Samuel E. Landrum, M.D., Chairman

Fortunately, there have been no complaints lodged against physicians during the 1988 year in our district.

Fifth Councilor District
Cal R. Sanders, M.D., Councilor

The Fifth Council District met on January 18, 1989 at the El Dorado Country Club. Officers were elected as follows: Richard Pillsbury, President; Bert Doherty, Secretary-Treasurer; and Wayne Elliott, Councilor.

Guest speaker was Dr. Joycelyn Elders from the Arkansas Health Department. Her topic concerned the social issue of teen pregnancy and need for

preventive care in teens and adolescents. Dr. Elders was extremely enthusiastic in presenting her talk. She seemed to be very dedicated in her efforts to bring about prevention of teenage pregnancy and drug abuse through education. Her preventive programs are directed primarily to early pediatric screening, preventive health maintenance and teaching responsibility of sexuality in children prior to their sexually active age.

She suggested that these basic programs and counseling be integrated into our school system and suggested ways of financing such programs.

Dr. Elders' presentation was the most informative, interesting and appropriate that I have heard since my being present at all Fifth Council District meetings in the past 17 years. Her enthusiasm was contagious and provoked questions and answers between audience and speaker.

I was so impressed by her approach of prevention by education rather than the expensive end stage treatment that I recommend the Society invite Dr. Elders to one of our meetings to give the similar speech that she gave to our Fifth Council Meeting in El Dorado.

Eighth Councilor District

William N. Jones, M.D., Senior Councilor

Following are the highlights of activities of the Eighth Councilor District during the following year:

Held meetings for all physicians in the district with representatives from the Arkansas Foundation for Medical Care.

Adopted a resolution for the attention of the Arkansas General Assembly stating support for a mandatory seatbelt law in the state.

Arranged a program for members in the district to hear the Medicaid Program Director of the Arkansas Department of Human Services.

Endorsed the Auxiliary's Adolescent Health Program.

Presented scholarships to Med-Camps of Arkansas.

Endorse the program of the Jefferson Comprehensive Care Center.

Presented a full-tuition scholarship to a freshman medical student at the University of Arkansas College of Medicine.

Held a joint meeting with the Auxiliary on the subject of the upcoming state legislation of interest to the profession.

Tenth Councilor District

Morton C. Wilson, M.D., Senior Councilor

The Sebastian County Medical Society Legislative Liaison Committee, under the able leadership of Dr. Paul I. Wills, formed the Sebastian County Physicians for Better Health Care, Incorporated, as a separate political action committee with its officers and directors appointed from the Sebastian County Medical Society. The purpose of this committee is to establish a meaningful, long-term relationship with each of our area legislators so that they may remain informed as to the political issues of the day and the impact they have on medicine. We have openly discussed our concerns with these legislators and made suggestions for legislative changes. Extensive contacts have been made with them as well as financial contributions to their political campaigns. A fundraiser was held for John Paul Hammerschmidt in August of this year.

In the spring, the Pope County Medical Society hosted a reception and dinner for the area's state senator and representatives. Following the dinner, the legislators spoke briefly and answered questions from members of the Society and their wives. The attendance at this function was very encouraging, as was the dialogue and comments from the members of the legislature.

The chairman of the Sebastian County Legislative Liaison Committee, Dr. Wills, has been active in forming a coalition with small business (National Federation for Independent Business) headed by a local businessman. The purpose of this coalition is to actively lobby our legislature for improvements in tort reform.

Dr. James Kolb of Russellville and Dr. Morton Wilson of Fort Smith have presented programs on AIDS to civic groups and local hospital medical staffs utilizing the material provided by the Arkansas Medical Society's Committee on AIDS headed by Dr. William N. Jones of Little Rock.

Young Physicians' Committee

David L. Rogers, M.D., Chairman

The Young Physicians' Committee was established as a committee of the Council in March of 1988. The purpose of this committee is to provide a direct means for young physicians in the state to become involved in the Arkansas Medical Society.

It was felt that younger physicians frequently saw the policy-makers of the AMS as the "good ole boys" who were not responsive to input from the rank and file membership. Our committee brings one physician from each Councilor District who is under the age of forty or in practice less than five years to meet and consider issues of importance to those physicians just starting practice. Those issues felt to be worthy of becoming AMS policy are formed into resolutions to be considered by the entire House of Delegates; several of our resolutions are found elsewhere in this issue of the *Journal*.

Another function of our committee is to select a delegate to the AMA Young Physicians' Section, which meets along with the AMA at its annual and interim meetings. Dr. David Harshfield of North Little Rock was selected as our delegate at our September 17th organizational meeting. Our committee hopes to present issues of concern to this national organization through our delegate.

Current membership includes: Barry Herman, Jonesboro, District 1; Tom Benton, Salem, District 2; Ralph Bard, Forrest City, District 3; Anna Ridling, Pine Bluff, District 4; Bill Dedman, Camden, District 5; John Hoyt, DeQueen, District 6; Eugene Shelby, Hot Springs, District 7; David Harshfield, North Little Rock, District 8; David Rogers, Fayetteville, District 9; and Joe Cloud, Russellville, District 10.

We feel we represent a good cross-section of the physicians in the state, and hope any physician under the age of forty who feels unrepresented in the policy-making decisions of the AMS, will please contact me or the committee member from your district. We assure you that your concerns will be addressed.

AMS Medical Student Section Ron McGaugh, President

It was a very productive year for the medical students in both the Arkansas Medical Society and the American Medical Association. There has been a change in leadership at both the state and national levels which has sparked new enthusiasm among the students.

The annual meeting of the Medical Student Section of the American Medical Association was attended by Todd Hlavaty and Stuart Levy. Todd Hlavaty then took over the reins of the AMA/MSS and headed up a banner year of recruiting in the fall. Todd was honored with a plaque for recruiting over 80% of the incoming freshman class at UAMS for both the AMA/MSS and the AMS/MSS.

The Arkansas Medical Society held a party for the incoming freshman and sophomore members which was attended by well over 300 people. Many thanks to the AMS for a wonderful time.

On behalf of the students, I would also like to thank the AMS for bringing Dax Cowart, a burn victim from Texas, to speak to the medical school last spring. This was a very moving and thought provoking testimony, and we appreciate your time and effort in letting us share in that. This fall the students formed a committee headed by Justin Malloy to bring in other speakers of interest to the health community with topics ranging from medical, legal, to economics.

The interim meeting of the AMA/MSS was attended by myself and Devinder Bhatia. As you may suspect, the Harvard RBRVS was the main topic of interest both in the Mid-America Caucus, of which Arkansas is a member, and the AMA House of Delegates.

Fighting AIDS through Education (FATE), is a program that Vicki Henderson, a sophomore, brought to our attention. An article on FATE appeared in the November 1988 issue of the *Journal of the Arkansas Medical Society*. Vicki and the other students volunteered their time and have talked to over 3,000 high school students around the state. AIDS is certainly the most tragic and devastating disease of our time and it is wonderful to see the walls of ignorance start to come down. We feel that FATE is a very effective tool in achieving this end. Congratulations to Vicki for a job well done.

Finally, again on behalf of all the students, I would like to thank David Wroten and the staff at the Arkansas Medical Society for their outstanding support. David has had a hand in planning, or helping with, almost everything the students have done over the past year. Thanks, David, and I look forward to working with you during the coming year.

Medical Education Foundation For Arkansas W. Martin Eisele, M.D., President

As the years go by, the Arkansas Medical Education Foundation is becoming ever more important as a source of funds to support the medical school and its students. The funds available are very slowly increasing, but it has been many years since the Foundation has had any increase in the amount of the annual dues allotted to it. This year, the Foundation formally asked the Council of the Arkansas Medical Society to consider an increase in this annual allotment to the Foundation. This request is now under considera-

tion and, hopefully, will be acted on favorably by the Council next year.

I also wish to take this opportunity to thank the members of the Board of the Foundation for their continuing interest and support.

Cleburne County Medical Society **Amador C. Campos, M.D., President**

The following officers and delegates of the Cleburne County Medical Society were elected for the period January 1, 1989 through December 31, 1989: Amador C. Campos, President; Thomas Eans, Delegate; and Amador C. Campos, Alternate Delegate.

Last March, Dr. William Jones, Chairman of the Arkansas Medical Society Committee on AIDS, offered the cooperation of the AMS to promote lectures in this community as part of an educational program relating to AIDS. As a result, a lecture was given by Dr. Forrest B. Miller, Jr. and Ms. April J. Jackson, R.N., M.S.N., to physicians and nurses of the Cleburne County Hospital on March 10, 1988. It was a splendid presentation that was very much appreciated by all of us.

Subsequently, Dr. Miller and Dr. Campos made a similar presentation to the public of this community on May 12th. Though the attendance was much less than expected, there was a satisfactory degree of interest manifested by several questions addressed to the speakers.

On June 1st, Dr. Campos was a guest at a radio broadcast seminar sponsored by KAWW Radio Station in Heber Springs. Several telephone questions from listeners were answered during the half-hour program.

Several brochures provided by the Arkansas Medical Society Committee on AIDS were widely distributed to factories, business offices, and schools.

Crittenden County Medical Society **Steve P. Schoettle, M.D.**

The year 1988 was a busy year for the Crittenden County Medical Society. Unfortunately, it began on a downward and hectic note, as our community was still suffering from the double disaster that hit us in late December 1987. The tornado and flooding of this time caused a great deal of havoc throughout our community. The medical community was involved both in primary care to the injured and supportive help as well. I am glad to say that our community has rebuilt itself from these disasters, and is much stronger

from the experience. We have recently completed a "White Ribbon Campaign" to commemorate the victims of those disasters and to commit our community to further rebuilding.

In the spring of 1988, we continued our programs of communication with our state and United States Legislators by inviting our local legislators to a barbecue meeting. This offered us a relaxed, casual environment in order to get to know them much better. U. S. Representative Bill Alexander also met with us in an open forum to discuss multiple issues. Both of these sessions were extremely helpful and will, hopefully, help us in the political arena.

This summer, the County Medical Society was involved in a nationwide "Red Ribbon Campaign" to help fight drug abuse. We have helped our city implement a drug campaign which is being carried out in all our elementary schools as well as junior and senior high schools.

This fall we assisted our Medical Auxiliary in presenting an anti-smoking program to our county elementary children. This was a program which was presented by the Arkansas opera group. This exposed our young school children to both the fine arts and to the hazards of smoking.

Our plans for the new year include further involvement in our city-wide anti-drug abuse program as well as further involvement with our local politicians.

Sebastian County Medical Society **Charles Floyd, M.D., President**

In January, the Sebastian County Medical Society invited all the state senators and representatives to attend our regular meeting for an open panel discussion. Meetings with legislators have continued on an individual basis.

A Legislative Liaison Committee has been formed and it is actively meeting with local legislators.

Sebastian County Medical Society has developed a PAC (Sebastian County Physicians for Better Health) with a fund drive and contributions being made to the state legislature. We also sponsored a fund-raising social for U. S. Representative John Paul Hammerschmidt.

A donation of \$5,000 was made by the Sebastian County Medical Society to Dr. Jerry Jones of the Arkansas Children's Hospital for the production of an educational video tape on child sexual abuse.

At a joint meeting with the Sebastian County Medical Society Auxiliary, Dr. Joe Martindale, Chairman of the Arkansas Medical Society's

Physicians' Health Committee, spoke on drug abuse, prevention, and care that is available.

Tri-County Medical Society
Lewis G. Allen, M.D., Secretary

Minutes of the Quarterly Meeting, December 14, 1988, Horseshoe Bend:

The meeting was called to order by President Tom Benton at 7:45 p.m. The following members and guests were present:

Dr. and Mrs. Tom Benton, Dr. and Mrs. Griffin Arnold (guest), Dr. Carl Arnold, Dr. Mike Moody, Betty Meisenheimer, Dr. and Mrs. Louis Campos, Dr. and Mrs. Wolfe, Dr. and Mrs. Bob Lane, Dr. and Mrs. Meryl Grasse, Dr. and Mrs. Lewis Allen, and Dr. and Mrs. Russell Webb.

The minutes of the September 14, 1988, meeting were read and approved and the Treasurer's report submitted. There being no old business, a discussion of the purpose and plan of the Arkansas Medical Society to develop a volunteer program for the care of the medically indigent followed with general agreement of the concept. This was followed by discussion of the problem surrounding the PRO in Arkansas and the impaired function of the Arkansas Medical Society to deal with related problems and the position assumed by the Speaker of the House of Delegates of the Arkansas Medical Society, Sybil Hart, M.D. Upon a motion made and seconded, the delegate from the Tri-County Medical Society was instructed to oppose the re-election of the present speaker, Sybil Hart.

The proposed slate of officers for the coming year, as submitted by the Trustees, was approved by unanimous vote. Those elected to office were:

President: A. Meryl Grasse, M.D.

President-elect: Carl Arnold, M.D.

Secretary/Treasurer: Lewis G. Allen, M.D.

Delegate to AMS House of Delegates: Michael Moody, M.D.

Alternate Delegate to the AMS House of Delegates: Thomas Benton, M.D.

Trustees: A. Meryl Grasse, M.D. - 3 years
(re-elected)

Robert Lane, M.D. - 2 years

Carl Arnold, M.D. - 1 year

It was announced that the next meeting will be the Second Meisenheimer Memorial Lecture to be hosted by Sharp County on March 8, 1989. The speaker will be Martin P. Meisenheimer, IV, M.D. Upon a motion made and seconded, followed by unanimous vote, a \$300.00 honorarium was approved for the Meisenheimer Memorial Lecture.

The business meeting then adjourned and a program on Ultrasound Evaluation of the Prostate was presented by Russell Webb, M.D., a urologist from Mountain Home.

General discussion followed.

The meeting adjourned at approximately 9:40 p.m.

On March 9, 1989, the Tri-County Medical Society will conduct the Second Annual Meisenheimer Memorial Lecture. Appropriately, the speaker will be Martin P. Meisenheimer IV, M.D., one of Dr. Meisenheimer, III's, six children. Dr. Meisenheimer IV is a gastroenterologist from Indianapolis.

Tri-County Medical Society is the first component society to so memorize a former cherished member.

White County Medical Society
Larry W. Weathers, M.D., President

The year 1988 has been a particularly significant year for White County. First, CARTI North was opened in White County which will be able to provide radiation therapy to any cancer patient that would otherwise have to drive into Little Rock. Two local physicians, Robert Elliott and Porter Rogers, Jr., played a significant role in making this possible. It is because of their efforts that Carti-North is now open and functioning in Searcy, Arkansas.

The second major advance is the commitment of Wal-Mart to open a new plant, which will supply 300 to 350 new jobs in the White County area. Dr. Robert Elliott was also instrumental in helping to obtain the commitment of the new Wal-Mart through his efforts in the Searcy Chamber of Commerce.

Arkansas Department of Health
M. Joycelyn Elders, M.D., Director

I am proud to present a report of the Arkansas Department of Health's activities and accomplishments for the state fiscal year 1987-1988.

The Arkansas Department of Health is responsible for protecting and promoting the public's health. At 96 local health departments, we provide personal health care for disease prevention and health maintenance. We work to control environmental conditions affecting health and respond to new environmental health hazards. We regulate health facilities and food service establishments to assure compliance with standards of quality. We

collaborate with other health providers for the development of effective health care delivery systems. The list goes on.

We identified six priority areas for the past year: maternity care, adolescent health, AIDS, environmental health studies, water quality, and grant seeking. Activities in those areas are described in this report.

We could not provide personal health care without the continued support of private physicians contributing time in our clinics and directing the treatment of our home-bound clients. We could not advance AIDS prevention, health data base development, and systems of health care without the support of the Arkansas Medical Society. The Society's participation in and support of public health is vital and gratefully acknowledged.

Major Initiatives

Good Beginnings

Early and continuous prenatal care is important to ensure the best health for the mother and baby. The Department provided prenatal care for 11,195 maternity patients at 62 clinic sites in 54 counties during fiscal year 1988. This maternity caseload represented approximately one-third of all pregnant women in Arkansas.

Maternity clinic staff obtain a health history, conduct a physical examination and laboratory profile, and see a patient at regular intervals during her pregnancy for medical monitoring and counseling. In 1987, a revised state Medicaid plan increased the number of pregnant women eligible for Medicaid as well as expanded the scope of reimbursable maternity services. This Medicaid expansion allowed the Department to expand its maternity services this year. Known as the Good Beginnings Initiative, expanded maternity services include 1) medical, nutritional and social assessments for determination of risk status; 2) nutritional consultation, social work consultation, and appropriate medical referrals for patients designated as high risk; 3) case management to assist patients with keeping appointments and registering for hospital delivery; 4) a six-class course on pregnancy, labor and delivery, and parenting; and 5) home visits for eligible infants.

Quality prenatal care is an investment. For every dollar spent on prenatal care, approximately three dollars are saved on medical care for babies born with health problems.

Adolescent Health

Adolescents are confronted with some of the most serious health risks that children face. Like all children, adolescents need health care for common illness and conditions. Because of the

dramatic physical growth and developmental challenges adolescents experience, they also have unique health problems related to growth and development, risk-taking behavior, sexuality, and the psychological transition to adulthood.

Consequences of unmet adolescent health needs are reflected in Arkansas' vital statistics. In 1986, death by external causes, which include motor vehicle accidents, drowning, suicide, homicide, and fires, accounted for 76% of teen deaths. A total of 8,874 adolescents became pregnant in 1986. Arkansas surpasses 49 states in its percentage of births to teen mothers.

Dr. Elders made adolescent health services and teen pregnancy prevention a top priority for the Department during her first year as Director. She promoted school-based clinics as a means for increasing the availability and accessibility of health care for teens. Upon a community's request, the Department works with a community and school to select and implement basic health services for students. School-based clinics provide preventive medical care service and stress education to promote behaviors that reduce the risk for health problems. Parental consent is required for students to receive services. This year, the Department worked with four schools to establish and conduct school-based clinics. Nine additional school-based clinics are planned for next year.

Dr. Elders traveled the state speaking about the need to prevent teen pregnancy. She accepted over eighty speaking engagements from state and community groups and challenged each one to increase educational, health and social services in an effort to reduce teen pregnancy and its associated problems.

AIDS Prevention

AIDS (acquired immunodeficiency syndrome) is a fatal disease with no cure. Education for the prevention of AIDS remains the most effective tool for fighting the disease. The Department's educational efforts are targeted to three groups: people at high risk of infection, health professionals, and the general public. The goal of the educational message is two-fold; to reduce transmission of the HIV virus which causes AIDS and to reduce fears and misconceptions concerning AIDS.

The need to involve community organizations in educating individuals at risk has led to a variety of new and expanded initiatives. Nine contracts were awarded to state and community organizations for AIDS education. Seventeen individuals representing state agencies, professional organizations, and special interest groups serve on the Department's

AIDS Advisory Committee. The Department also formed a Minority AIDS Task Force with 14 representatives of organizations serving minorities.

A variety of educational methods were in place this year including: 1) counseling and testing; 2) presentations by members of the AIDS Bureau; 3) an AIDS telephone hotline; and 4) a resource center for distribution of educational materials.

A total of 7,035 tests for AIDS were performed last year, a 500% increase over last year. The Speaker's Bureau made an average of 57 presentations a month, an average of 53 calls a week were received on the hotline, and the resource center distributed over 100,000 pieces of educational material. The Department is committed to this level of prevention activities until a cure for AIDS is found.

Environmental Health Services

The Department responded to the discovery of, and the potential for, new environmental health hazards. In response to public concerns that the health of El Dorado residents may be adversely affected by an area industry, the Department designated and conducted a two-year study of the overall health status of El Dorado residents. Blytheville served as a control community for comparison. For the study, 136 residents of El Dorado and 140 residents of Blytheville participated. The survey was designed to determine whether the overall health status of citizens in El Dorado differed significantly from the health status of citizens elsewhere in the state. The survey focused on whether the people of El Dorado suffered higher rates of certain selected acute and chronic conditions than other Arkansans.

The conditions analyzed included 56 selected acute and chronic health problems, cancer, reproductive health problems, and life style. The subjects sampled from the cities of El Dorado and Blytheville were very similar in their demographic characteristics, such as age, sex, and race. The analysis of self-reported health conditions from the survey suggested that there are no significant differences in the health status of the two communities. None of the analyzed acute or chronic conditions were shown to occur significantly more often among El Dorado residents.

In response to health-related complaints by teachers in the Lakeside School District in Hot Springs, the Department distributed questionnaires and collected environmental samples. Based on the data obtained, the Department submitted detailed recommendations to the Lakeside School District for the reduction of levels of mold contamination.

Water Quality

The Department is responsible for ensuring the quality and safety of public water systems. During fiscal year 1988, the Department expanded its water quality activities. New initiatives were aimed at improving the quality of drinking water, determining the extent of pollution in waterways, and preventing adverse health effects.

Laboratory and engineering staff and equipment were expanded to fulfill new Federal Safe Drinking Water Act requirements. The expansion allows samples from community water systems to now be tested routinely for volatile organic chemicals, e.g., industrial solvents.

To address the problem of lead in drinking water, engineers coordinated a statewide public notification on causes and effects of lead in drinking water. The State plumbing codes were revised to require lead-free solder for joints in water pipes.

The Department initiated a quarterly newsletter, the Arkansas Drinking Water Update, to communicate changes in the drinking water program. The Update was well received by water managers, consulting engineers, and other water agencies. The newsletter was particularly helpful in communicating the Federal Safe Drinking Water Act changes and their impact on Arkansas' compliance efforts. Seminars on the federal amendments were also conducted by the engineering staff.

Department epidemiologists and sanitarians, along with other state agencies' staff, participated in regional meetings held because of concern over the levels of chlordane found in fish in the Mississippi/Missouri River system. Frequent consumption of fish contaminated with high levels of chlordane can cause cancer. Federal officials and representatives from nine states met to discuss the issues involved. While no final conclusions were reached on the chlordane problem, the meetings were beneficial in exploring issues such as uniform sampling procedures, laboratory analyses, and product recalls. The group will continue to work toward resolving mutual water quality concerns.

Grant Seeking

Many of Arkansas' public health programs depend on grant money from the federal government and private sources. In fiscal year 1988, the Department intensified its grant seeking efforts in order to expand public health services. In addition to receiving 15 grants for ongoing services, the Department was awarded 10 new grants. Among the new grants received were:

- * \$1,200,000 from the Robert Wood Johnson Foundation to improve Arkansas' perinatal

system of care for the reduction of infant mortality

- * \$750,000 from the Robert Wood Johnson Foundation for a Senior Services Network which provides supportive services that enable senior citizens to remain in their homes
- * \$150,000 from the Department of Health and Human Services to work with Washington County teen parents for prevention of a second unplanned pregnancy and reduction of the potential of child abuse

The area management and local health unit staffs work closely with local government officials and community leaders in preparing grant applications to the Arkansas Industrial Development Commission for construction and renovation of public health facilities. Of the ten applications submitted, seven were approved totaling \$988,114. Construction of new facilities were approved for Scott, Sevier, Mississippi, and Hempstead Counties. Renovation was funded for Fulton, Desha-McGehee, and Sharp County health units.

Fiscal Year 1988 Report of Activities

Personal Health Services

<i>Services for infants and children</i>	Number of services/patients
Newborn screenings for phenylketonuria	37,092
Newborn screening for congenital hypothyroidism	38,187
Infant hearing screening	662
Health assessments for Medicaid eligible (EPSDT) children	4,186
Child health patients	38,492
Child health visits	70,067
Blood lead screenings	1,273
Hearing screenings	178,505
Vision screenings	191,081
Hearing & speech clinic patients	1,844
Hearing & speech clinic visits	3,827
Infant car seats loaned	3,192
Autopsies performed for suspected Sudden Infant Death Syndrome (SIDS)	48
WIC participants:	
Women	23,205
Infants	30,359
Children	34,472

Services for Women

Family planning patients	47,995
Family planning clinic visits	100,876

Maternity patients	11,195
Maternity clinic visits	47,615
Cervical cancer screenings	40,291

Disease Control Services

Immunizations	(estimated doses):
Polio	105,000
DPT	115,000
TD (Adult)	13,000
MMR	30,000
DT (Pediatric)	1,400
IPV (Salk)	1,000
Post-exposure rabies treatment patients	140
Gonorrhea cases	7,800
Syphilis cases	407
Sexually transmitted disease investigations	8,792
AIDS testing and counseling	7,035
Tuberculosis skin tests	79,064
Tuberculosis clinic patients	2,146

In-Home Services

Patient admissions	8,335
Home health visits	150,687
Home care visits	33,873
Personal care visits	213,200

Special Support Services

Nutrition	
Prenatal counseling sessions	7,500
Infant and children counseling sessions	8,750
Health Education and promotion	
Educational presentations made	497
Pamphlets distributed	70,279
Audiovisual material requests filled	2,539
Promotional material requests filled	197,556

Environmental Health Services

Water / Wastewater

Inspections	451
Plans reviewed	1,451

Plumbing

Inspections	2,463
Licenses issued	4,277
Plans reviewed	1,419

Sanitarian Services

Food establishment inspections	28,736
Food establishment plans reviewed	1,053
Milk plant and dairy farm inspections	9,123
Individual sewage disposal (septic tank) inspections	12,072
Public swimming pool inspections	4,349

Radiation Control

Radioactive material user inspections	171
Radiological equipment inspections	212

Technical Services

Public Health Laboratories

Medical samples analyzed	271,871
Environmental samples analyzed	86,882

<i>Health Facility Services</i>		
Health facility licensures/certifications		352
Health care providers certified for Medicaid/Medicare		344
<i>Emergency Medical Services</i>		
Ambulance vehicle permits		330
Ambulance services licensed/relicensed		197
Emergency medical technicians certified/recertified		737
<i>Pharmacy Services</i>		
Dose units of drugs destroyed	2,565,694	
Investigations of legitimate drug handlers		178
Investigations of providers of veterinary drugs		302
<i>Blood Alcohol Program</i>		
Equipment inspection		645
Individuals trained		218
Support Services		
<i>Vital Records</i>		
Certified copies of vital records issued	261,396	
Marriages registered		32,552
Divorces registered		16,171
Births registered		34,371
Deaths registered		24,665

Arkansas State Medical Board
Joe Verser, M.D., Secretary

The officers and members of the Arkansas State Medical Board are W. Ray Jouett, Chairman; Warren M. Douglas, Vice Chairman; Joe Verser, Secretary/Treasurer; Asa A. Crow; Mr. John B. Currie, Sr.; James L. Gardner; John F. Guenthner; Mr. Dewey Lantrip; Jim E. Lytle; Alonzo D. Williams; Rhys A. Williams; George F. Wynne; and Mr. William H. Trice, III, attorney.

The Arkansas State Medical Board 1988-89 directory will be available within the next few weeks. There has been some problems with the directory because all records were being put on a computer. The annual directory will now be a computer printout.

The legal firm of Howell, Price, Trice, Basham, and Hope, P.A., now represents the Arkansas State Medical Board.

Legislation has been introduced which will give a board member immunity from a lawsuit while performing his official duties. Legislation has also been introduced which broadens the disciplinary power of the board to include an additional penalty of a fine up to \$1,000 for each offense against a physician.

The Arkansas State Medical Board licensed 237 physicians by examination, 175 by reciprocity, and 132 by the national board during the year. The following is a summary of the Board's proceedings:

Physicians registered for 1988:	
3,668 resident	
2,651 nonresident	
Physicians certified to other states:	213
Licenses revoked for nonpayment of annual registration fee:	129
Licenses suspended for nonpayment of annual registration fee:	171
Licenses suspended for violation of Medical Practices Act:	7
Licenses revoked for violation of Medical Practice Act:	0
Cases pending for violation of Medical Practices Act:	3
Physicians' DEA privileges surrendered:	0

Balance Sheets
June 30, 1988 and 1987

<u>Assets</u>	<u>1988</u>	<u>1987</u>
<i>Current Assets</i>		
Cash	\$209,701	\$208,820
Certificates of deposit	368,868	252,609
Accrued interest receivable	4,934	4,034
Prepared expenses	<u>1,105</u>	
Total current assets	\$584,608	\$465,463
	<u>1988</u>	<u>1987</u>
<i>Property, Plant, and Equipment, at Cost</i>		
Office equipment	\$ 33,436	\$ 13,596
Less accumulated depreciation	<u>11,512</u>	<u>8,039</u>
Total	<u>\$ 21,924</u>	<u>\$ 5,557</u>
Total Assets	\$606,532	\$471,020
<i>Liabilities and Fund Balance</i>		
<i>Current Liabilities</i>		
Accounts payable	\$ 58,409	\$ 16,158
Deferred income	<u>17,770</u>	<u>7,385</u>
Total current liabilities	<u>\$ 76,179</u>	<u>\$ 23,543</u>
Fund Balance	<u>\$530,353</u>	<u>\$447,477</u>
	\$606,532	\$471,020

University of Arkansas College of Medicine
I. Dodd Wilson, M.D., Dean

Progress has characterized the past year at the University of Arkansas College of Medicine. Educational programs continue to be the primary focus of the College's efforts. Enhancement of research is a major goal of the long range plan, and will depend upon recruitment and program development in internal medicine, toxicology, and the basic science departments. Continuing additions to and renovations of our clinical facilities are providing an environment more conducive to high quality health care and effective education.

The curriculum underwent a systematic review. The sophomore year was lengthened to thirty-four weeks and the single 224 contact hour pathology course moved into fall and spring terms. Pharmacology was moved from the fall term to the spring term. The Curriculum Committee continued its efforts to revise the curriculum and presented proposals to the faculty for approval. These proposals are being debated and will be voted on by the faculty this spring.

The Graduate Medical Education Committee of the College of Medicine recently was reorganized and activated. This committee reviews all residency programs and assures compliance with the regulations of the Accreditation Council for Graduate Medical Education.

Dr. Terry Yamauchi was named Associate Dean for Continuing Medical Education. With his leadership, the continuing medical education programs of the college will be more responsive to the needs of Arkansas' physicians.

The College's goals in research are to double its level of federal funding within four years, to concentrate on targeted areas for programmatic development, and to equip the faculty with state-of-the-art research equipment and laboratory facilities. The faculty has been successful recently in acquiring new grant support. Areas that have been targeted for emphasis include research in neurosciences, alcohol and drug abuse, molecular biology, musculoskeletal disorders, cancer, and eye disease. The campus is in the midst of a fund drive to develop an Arkansas Center for Eye Research, and has recently received several large gifts toward this goal.

The faculty provides most of the medical care in three major hospitals, having a total of 2,000 beds. This constitutes a substantial resource for Arkansas, regardless of their ability to pay. Special

accomplishments during the 1987-88 year include the opening of a new outpatient surgery facility at the University Hospital; the completion and opening of two new patient floors at the Arkansas Children's Hospital to house child psychiatry, rehabilitation and other programs; the development of an in vitro fertilization program; and the renovation of the nursery, the obstetrical station, and Station 3A at the University Hospital.

Recruitment is a continuing process in the College of Medicine. This year, Dr. Thomas C. Andreoli was appointed Professor and Chairman of the Department of Medicine. Dr. Andreoli is recruiting heads of three divisions in his department and recently announced the appointment of Dr. Bart Barlogie from the M. D. Anderson Hospital as Director of Hematology and Oncology. In addition, the College has added many new faculty, especially in the departments of pathology, psychiatry, surgery, pediatrics, microbiology, radiology, and anatomy.

The faculty has continued to publish scientific articles, reviews, books, and book chapters. Many faculty were recognized for their excellence, including Dr. Joseph Bates, who was elected President of the American Thoracic Society; Dr. William Stead who received the James D. Bruce Award from the American College of Physicians and the Trudeau Medal from the American Lung Association; and Dr. Joycelyn Elders who was named Director of the Arkansas Department of Health.

The College of Medicine has as its goals the continuing development of excellence in teaching, research, and service. We will work for the improvement of health care in Arkansas and are especially concerned about the difficulties that rural communities are experiencing in maintaining hospitals and attracting physicians. We have facility needs, the number one priority being to obtain a modern research building. Faculty numbers in the basic science departments must be increased to make our academic programs competitive with other medical schools. We must enhance our research efforts. Although our needs are substantial, we have special assets including our three major hospitals, our close relationship with the National Center for Toxicology Research, and a developing sense of optimism and continuing progress at the College. The goal is to translate this progress into programs which continue to benefit our students, graduates, the medical community, and the citizens of Arkansas.

Program Information

"Together We Are One: Focus On The Future"



Mrs. Joe Ed (Mary Lynn) Smith

**Arkansas Medical Society Auxiliary
Sixty-Fifth Annual Session
April 27 -29, 1989
Arlington Hotel
Hot Springs, Arkansas**



Mrs. David (Barbara) Thibodeaux

Registration

Mezzanine, Arlington Hotel

Thursday

1:00 p.m. - 4:00 p.m.

Friday

8:00 a.m. - 12:00 noon

Saturday

8:00 a.m. - 10:00 a.m.

Official honorary hostesses for the Sixty-fifth Annual Session are past presidents of the Arkansas Medical Society Auxiliary.

THURSDAY, APRIL 27, 1989

2:00 p.m.

Pre-Convention Board Meeting

All State Officers, State Committee Chairmen, County Presidents, County President-elects, and Past State Presidents. All new Board members for 1989-90 are cordially invited to attend.

7:00 p.m.

Presidents' Reception and Silent Auction

FRIDAY, APRIL 28, 1989

8:00 a.m.

Working Breakfast

State President-elect and State District Vice President-elects

8:30 a.m.

Continental Breakfast

Members and Guests

9:00 a.m.

Opening General Session

Mrs. Ray Jouett, President, presiding

Invocation: Mrs. Ralph F. Joseph

Auxiliary Pledge: All Members

"I pledge my loyalty and devotion to the Arkansas Medical Society Auxiliary. I will support its activities, protect its reputation, and ever sustain its high ideals."

Welcome: Mrs. Jerry Blaylock, State President 1986

Response: Mrs. Tom Dykman, President, Washington County

Roll Call and Seating of Delegates: Mrs. David Williams, Recording Secretary

Presentation of Rules of Convention

Timekeeper: Mrs. Harold Langston, Parliamentarian

Introduction of Special Guests:

Mrs. Joe Ed Smith, Chairman, Legislation Committee, American Medical Association Auxiliary, Inc.

Mrs. David C. Thibodeaux, President, Southern Medical Association Auxiliary

Greetings from Southern

Greetings from the Arkansas Medical Society

John M. Hestir, M.D., President

James R. Weber, M.D., President-elect

Mr. Ken LaMastus, Executive Vice President

Ms. Peggy Pryor Cryer, Director of Administrative Services

Convention Announcements: Mrs. Deno Pappas, Convention Chairman

Reports of Officers and Committee Chairmen

Unfinished Business

New Business

Election of the Nominating Committee

(2 from the Board; 2 from the House of
Delegates)

Election of Delegates and Alternates to the 1989

American Medical Association Auxiliary
Convention

Presentation of the 1989-90 Budget: Mrs.

Walter Mizell, Finance Chairman

Adjournment

11:45 a.m.

**Shuffleld Lecture/Luncheon and Awards Presenta-
tion**

Joint Luncheon with the Arkansas Medical Society

2:00 p.m.

Antique Tour for your pleasure with High Tea served
at four for your leisure

6:30 p.m.

Blue Cross Blue ShIELD Reception

8:30 p.m.

Rock n' Docs Dance

SATURDAY, APRIL 29, 1989

8:00 a.m.

Working Breakfast

State President-elect and County Presidents 1989-90

8:00 a.m.

Past Presidents' Breakfast

8:30 a.m.

Continental Breakfast

Members and Guests

9:00 a.m.

Second General Session

Mrs. Ray Jouett, President, presiding

Invocation: Mrs. Ralph F. Joseph

Roll Call and Seating of Delegates: Mrs. David

Williams, Recording Secretary

Reading Committee Report on Minutes from First

General Session: Mrs. William Harrison,
Chairman

Convention Announcements: Mrs. Deno Pappas,
Convention Chairman

Report from Past Presidents' Breakfast: Mrs.

Frank Morgan, Chairman

Introduction of Special Guest

Mrs. Joe Ed Smith, Legislation Committee,

American Medical Association Auxiliary,

"Auxiliary, Focus on the Future"

Report of County Presidents:

Moderators: District Vice Presidents

Northeast: Mrs. Joe T. Wilson

Northwest: Mrs. James E. McDonald

Southeast: Mrs. Malcolm Pearce

Southwest: Mrs. Allen Lee

Registration Committee Report: Mrs. William

Harrison, Convention Assistant Chairman

Unfinished Business

New Business

Report of the Nominating Committee: Mrs.

James Gardner, Chairman

Election of Officers

Report of the Resolutions Committee: Mrs.

William L. Steele, Chairman

Adjournment

1:00 p.m.

Luncheon, Belvedere Country Club

Hostesses: Greene-Clay County

Invocation

Presiding: Mrs. Ray Jouett, President

Introduction of Guests and Headtable

Presentation of Awards

AMA-ERF: Mrs. Robert P. Hughes, Chairman

Vinne E. Garrison Memorial Award: Mrs. C.

Lynn Harris, Chairman

Membership Award: Mrs. Larry Lawson,
Chairman

Doctors' Day Award: Mrs. Amail Chudy,

Southern Medical Association Councilor

Installation of Officers: Mrs. Joe Ed Smith,

Legislation Chairman, American Medical Asso-
ciation Auxiliary

Presentation of President's Pin and Gavel: Mrs.

Ray Jouett to Mrs. Larry Lawson

Presentation of Past President's Pin: Mrs. Mona

Lawson, President 1948-49, to Mrs. Ray Jouett

President's Message: Mrs. Larry Lawson,
President, 1989-90

Adjournment: Mrs. Larry Lawson

3:00 p.m.

Post Convention Board Meeting

Belvedere Country Club

4:00 p.m.

Memorial Service

Arkansas Medical Society and Auxiliary

7:00 p.m.

Inaugural Banquet and Entertainment

Body Improvements!

Arlington Hotel

Schedule at your convenience, Thursday
through Saturday, baths, massages, facials, etc.



ArkansasCardiologyClinic, P.A.

JAMES E. BOGER, M.D., F.A.C.C.
Clinical Cardiology and
Interventional Cardiology

G. STEPHEN GREER, M.D.*
Clinical Cardiology and
Electrophysiology

J. DOUGLAS HOLLOWAY, M.D.*
Clinical Cardiology and
Nuclear Cardiology

PHYLLIS BROWN
Business Administrator

600 Medical Towers II
9501 Lile Drive

*Diplomates of ABIM in Cardiology

Little Rock, AR 72205
227-7596 — 800-482-1224



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RANDY BARDWELL
Technical Director

Little Rock, AR 72205
227-7596 — 800-482-1224



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Technical Director

Little Rock, AR 72205
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The Richard D. Hall Cardiac Learning Foundation Inc.

Non Profit Organization - Donations Appreciated

Heart Disease
Is The
Challenge

Home of "Harvey" - The Cardiology Patient Simulator

Medical
Education
Is The
Solution

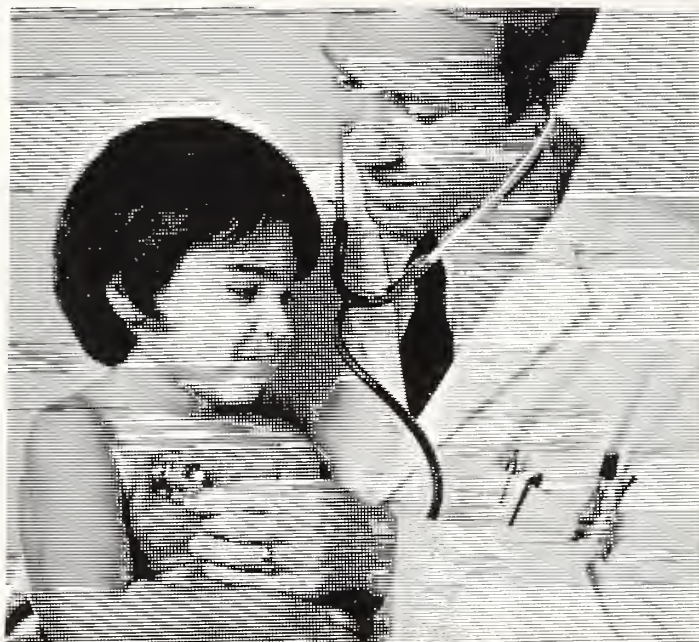
FAMILY PRACTICE. A REWARDING EXPERIENCE IN ARMY MEDICINE.

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Expect to work in a highly challenging and varied environment. Working with a team of highly trained professionals, you can receive assignments almost anywhere in the United States; the Army offers the largest system of comprehensive health care in the nation. Family Practice positions are also available overseas, in Germany and Korea.

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AIDS in Arkansas

AMS Special Committee on AIDS

William N. Jones, M.D., Chairman

Update: March 1989 Providing AIDS Education to a Vulnerable Population: High School and College Students

Elliot M. Fielstein, Ph.D.; Lynda L. Fielstein, Ed.D; and Michael G. Hazlewood, Ph.D.*

Need for AIDS education

Public health officials, led by the bold initiative of the U. S. Surgeon General's 1986 report on AIDS, have urged educators to become involved in combating the AIDS epidemic. Providing AIDS education to all segments of the population, i.e. adults, adolescents and children, is a burgeoning new priority in the fight against the spread of AIDS.

The purpose of educating the public about AIDS is prevention. Accumulated scientific knowledge has revealed that AIDS has no cure; but the precise modes of transmission of the virus have been identified. They are primarily certain "voluntary" forms of sexual contact and drug use which occur among consenting adults and, unfortunately, also occur among teens and even preteens. Avoiding behavior known to increase risk of contracting or transmitting AIDS, and using proper precautions to protect against exposure to the AIDS virus, are established methods of limiting the spread of AIDS. Thus, behavior change through education remains the only available course to limit the spread of AIDS.

Who should be taught?

It has been widely publicized that AIDS is most prevalent among the population of homosexual and bisexual males. However, what is not so well disseminated is the steady rise in new cases of AIDS among the heterosexual population. Between December 1987 and December 1988, the national percentage of heterosexuals with AIDS has remained at 4% of the total number of AIDS cases; however, the actual number of heterosexuals with AIDS has increased from 2,047 cases (December 1987) to 3,570 cases (December 1988).¹ This represents a 74.4% increase

over a 12-month period in the number of heterosexuals who have been diagnosed with AIDS. These data highlight the reality of heterosexual vulnerability.

Among the heterosexual population, those in the mid and late adolescent period, the high school and college aged student, may represent a potentially highly vulnerable group. Adolescence is an age of increased experimentation, particularly in sexual behavior and drug use. A recent nationwide poll conducted by Louis Harris and Associates² revealed that 57% of 17-year-olds have had sexual intercourse. Though intravenous drug use is probably nowhere near as common, it still presents a threat to young people who may have sexual intercourse with someone who has used an infected needle. With these sexual and substance abuse behaviors among the highest risk in the spread of AIDS, adolescence may be seen as a critical time for intervention.

Moreover, recent reports reveal that 20.7% of AIDS cases nationally are in the 20- to 29-year-old age group,³ and 34% of AIDS cases in Arkansas are in this age group.⁴ With the incubation period from infection to developing the "full blown" AIDS syndrome reported as being up to 5-10 years, it is presumed that the primary infection leading to AIDS in the 20-29 age group occurred in their late adolescence. Therefore, it is incumbent upon educators, especially of high school and college aged students, to insure that full and accurate knowledge about AIDS is disseminated.

Present levels of AIDS knowledge

The present level of knowledge of AIDS among high school and college students is unknown. Because few formal investigations of AIDS knowledge have been documented in the educational literature, the only available data are obtained from several recent studies on high school and college students. Two recent studies investigating knowledge of AIDS

* John L. McClellan Memorial Veteran's Hospital, 4300 West Seventh Street, Little Rock, Arkansas 72205.

Table I. Outline for AIDS Educational Programming**A. General Information**

1. Definition and Disease Description
 - a. Identify the disease name (recognize acronym AIDS)
 - b. Recognize immune system breakdown and vulnerability to disease
 - c. Recognize the reality of sexual transmission
 - d. Distinguish AIDS from other sexually transmitted diseases
2. Disease Course
 - a. Realize AIDS' deteriorating course
 - b. Recognize that early detection does not enable cure as in other diseases
 - c. Recognize AIDS causes death in nearly 100% of cases
 - d. Recognize there is no cure for AIDS
3. Epidemiology
 - a. Recognize any sex, race or ethnic group is vulnerable
 - b. Recognize AIDS is not solely a homosexual disease
 - c. Recognize large urban areas have largest number of AIDS cases
 - d. Realize AIDS was discovered within the last 10 years
 - e. Distinguish implausible theory of the origins of AIDS
4. AIDS Antibody Testing
 - a. Recognize screening test of antibodies, not disease itself
 - b. Recognize negative result does not mean immunity to AIDS
 - c. Recognize positive results without symptoms is possible
 - d. Recognize positive results do not indicate AIDS, only infection
5. Symptoms and Diagnosis
 - a. Recognize severe flu-like symptoms are early signs of AIDS
 - b. Recognize up to seven years or more incubation period after infection
 - c. Recognize that symptoms do not appear within days after infection

B. Transmission and Prevention

1. Casual Contact
 - a. Recognize no risk of contagion from casual contact
 - b. Recognize no risk of contagion through public toilets, telephones, drinking fountains
 - c. Recognize no risk of contagion through sneezing or coughing
 - d. Recognize no risk of contagion through shared drinking cups or utensils
 - e. Recognize no risk of contagion through handshaking or bumping together in a crowd
2. Sexual Contact and Heterosexual Transmission
 - a. Recognize hugging, touching and massaging are not high risk behaviors
 - b. Recognize direct oral or anal contact increases risk
 - c. Recognize anal intercourse increases risk
 - d. Recognize heterosexual transmission is confirmed
 - e. Recognize both heterosexual and homosexual transmission have been demonstrated
 - f. Recognize semen ejaculate during intercourse is a mode of transmission
 - g. Recognize sexual contact with multiple partners increases risk
3. Blood or Blood Products (Transfusion or Drug Use)
 - a. Recognize donating blood is not a risk factor
 - b. Recognize until recent safeguards, donor blood spread AIDS
 - c. Recognize sharing needles during drug use increases risk
 - d. Recognize AIDS may be spread through blood or blood products
4. Preventing Transmission
 - a. Recognize avoiding certain behaviors may prevent spread
 - b. Recognize safe sex practices may reduce the risk of transmission
 - c. Recognize proper use of condoms may reduce the risk of transmission

in high school aged samples in Iowa⁵ and California⁶ revealed some startling findings. As one might have expected, much greater AIDS knowledge was found among the California (San Francisco) high school sample than the Iowa sample. Yet, despite a high level of AIDS knowledge, the San Francisco sample were found to have notable gaps in knowledge of transmission and prevention. For example, only 66% were aware that AIDS could *not* be transmitted by

casual contact; and alarmingly, just 60% knew that a condom could lower the risk of contracting AIDS.

Two studies investigating AIDS knowledge in a college population have been reported recently.^{7,8} Results from these studies concurred that students possessed substantial AIDS knowledge. However, as was true of the studies with high school students, important knowledge gaps in the areas of transmission and prevention were identified. For example,

AIDS IN ARKANSAS 1989

January 1 - February 10, 1989

Total number of cases

reported	13
Number of deaths	4

CASES BY SEX

Male	10
Female	3

CASES BY RACE

White	9
Black	4

CASES BY RISK GROUP

Homosexual/Bisexual*	4
Homosexual & IV Drug User	2
IV Drug User	5
Hemophiliac	0
Transfusion	0
Heterosexual (Contacts)	1
NIR#	1

* No identified risk group (NIR)

CASES BY AGE GROUP

Less than 20	1
20 - 29	5
30 - 39	6
40 - 49	1
50 - 59	0
60 or more	0

OPPORTUNISTIC DISEASE

Pneumocystis Carinii	3
Kaposi's Sarcoma	1
Pneumocystis Carinii and Kaposi's Sarcoma	0
Other Diseases	9

AIDS IN ARKANSAS

1985 - 1989

Total number of cases

reported	186
Number of deaths	104

CASES BY SEX

Male	172
Female	14

CASES BY RACE

White	144
Black	41
Other	1

CASES BY RISK GROUP

Homosexual/Bisexual*	111
Homosexual & IV Drug User	30
IV Drug User	22
Hemophiliac	1
Transfusion	8
Heterosexual (Contacts)	9
NIR#	5

No identified risk group (NIR)

CASES BY AGE GROUP

Less than 20	3
20 - 29	63
30 - 39	80
40 - 49	27
50 - 59	6
60 or more	7

OPPORTUNISTIC DISEASE

Pneumocystis Carinii	86
Kaposi's Sarcoma	9
Pneumocystis Carinii and Kaposi's Sarcoma	5
Other Diseases	86

Source: Arkansas Department of Health.

McDermott et al (1987) found that only 68% of the sample were aware that indiscriminate sexual behavior was related to contracting AIDS. That is, a third of this sample of college students may not be aware that their sexual activity predisposes them to increased risk for AIDS. A significant knowledge gap such as this strongly highlights the need for educational efforts to shore up any void in critical areas of AIDS knowledge.

What should we teach?

While there is much discussion about providing AIDS education, few guidelines are available on what aspects of AIDS should be taught. Of course, "full and accurate" information is necessary, but greater detail and organization of AIDS information is needed to maximize the effectiveness of educational efforts. A proposed outline covering essential AIDS information is shown in Table I. This is not a proposed AIDS education curriculum, but may be viewed as a framework for developing an AIDS education program for use in academic, medical and mental health settings. The development of this outline is based on the rationale that students need to be aware, specifically, of modes and transmission routes of the AIDS virus as well as possess a broad general knowledge about AIDS.

Regarding transmission and prevention, adequate coverage must be given to insure that individuals have sufficient knowledge to limit their risk of exposure to the virus. That is, information on "how" the AIDS virus is transmitted or not transmitted must be provided. Regarding broad general knowledge, adequate coverage must be also given to aspects of AIDS which will lessen fear and debunk any myths and misconceptions that may exist. For example, myths

such as "AIDS is a gay disease," and "you can get AIDS by touching someone with AIDS, or by donating blood," must be combated and replaced with accurate epidemiologic information and instruction on safe and high risk behaviors in AIDS transmission.

This outline is considered to be "bare bones," around which a creative curriculum developer could structure a program. Also, the structure of this outline is well-suited to developing an instrument to measure AIDS knowledge, which could also be used on a pre- and post-test basis to assess the effectiveness of an AIDS education program. We are presently completing development and validation of such an instrument which will be available in a subsequent report.

References

1. Department of Health and Human Services. Centers for Disease Control reports on AIDS. MMWR; Dec. 1987 and 1988.
2. McCormick K. AIDS instruction: a troubling test for educators. *Am School Board J* 1987; 174:25-30.
3. Department of Health and Human Services for Disease Control Reports on AIDS. MMWR; June 1981 through December 1988.
4. Arkansas Department of Health (January 24, 1989), personal communication.
5. Price JH, Desmond S, and Kukulka G. High school students' perceptions and misperceptions of AIDS. *J School Health* 1985; 55(3):107-9.
6. DiClemente RJ, Zorn J, and Temoshok L. Adolescents and AIDS: a survey of knowledge, attitudes and beliefs about AIDS in San Francisco. *Am J Public Health* 1986; 76(12):1443-5.
7. McDermott RJ, Hawkins MJ, Moore JR, and Cittano BS. AIDS awareness and information sources among selected university students. *J Am College Health* 1987; 35(5):222-6.
8. Fielstein EM and Guyton RG. AIDS knowledge scales: test development and psychometric data. Paper presented at the annual meeting of the American Psychological Association, 1987, New York, NY.

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ELECTROCARDIOGRAM OF THE MONTH

Doug Poindexter, M.D.
John W. Watson, M.D.
UAMS Division of Cardiology
Little Rock, Arkansas

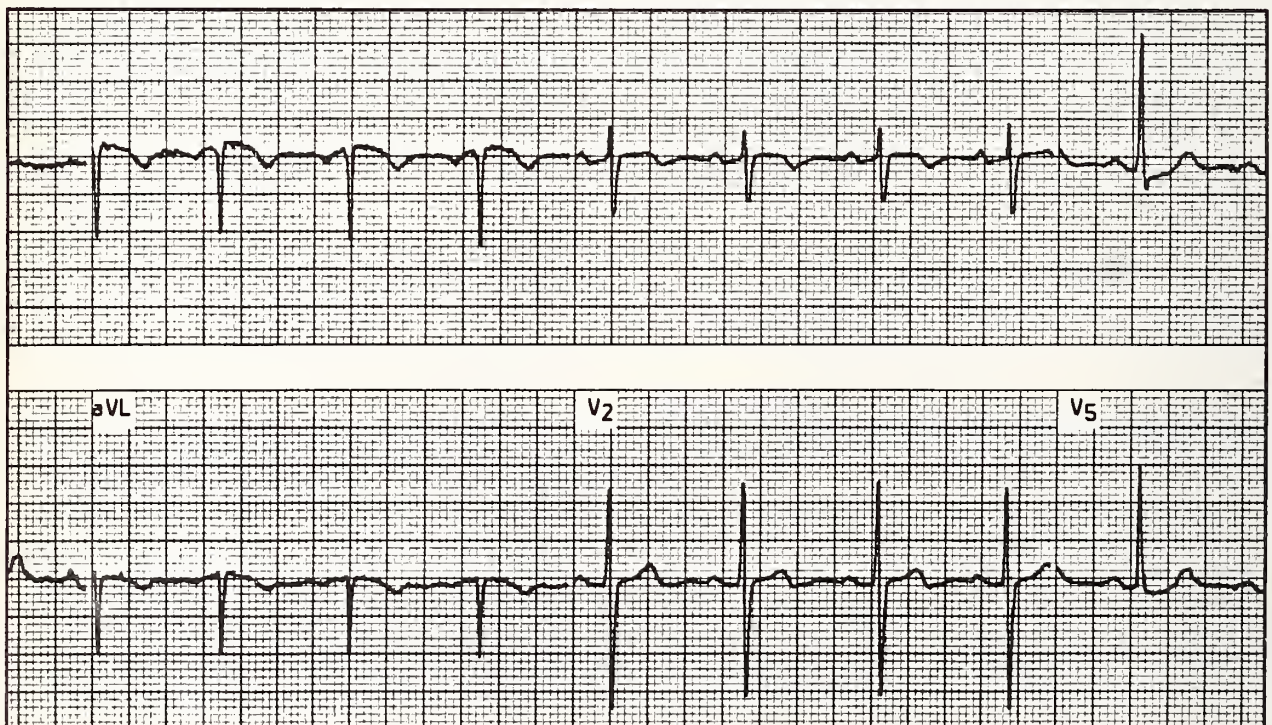
CLINICAL HISTORY:

O. W. is a 50-year-old smoker who presented for evaluation of exertional chest pain. A stress test was done. The resting ECG is shown. Angina was noted at 2:50 exercise. Exercise was concluded at 2:57 because of the abrupt development of ST changes. The bottom row shows V_3 at 2:57 of exercise, then at 0:08, 2:00, and 3:34 into exercise recovery. What do you think?

DISCUSSION:

The patient had angina, then intense ST elevation in V_3 which resolved 3:34 into exercise recovery. The usual pattern of ST change on the treadmill stress test is that of ST depression. The brief duration of the ST elevation mitigates against infarction. Indeed, the patient proved not to have infarcted but did have high grade occlusive disease in the left anterior descending coronary artery. One would thus suspect that the patient first had ischemia manifested by angina and then experienced coronary spasm. This is of course speculative.

The editor wishes to thank Dr. Poindexter of Conway for his assistance with this month's ECG.



THINGS To COME

MARCH 18

Anesthesiology Update 1989. Sponsored by the Arkansas Society of Anesthesiologists, Inc., and the Department of Anesthesiology, UAMS. University Conference Center, Little Rock. Five and one-half Category I credit hours. Registration fee: ASA Members or Anesthesiology Residents, no charge; non-members, \$40 (\$50 at the door); CRNA's, \$20 (\$30 at the door). Further information: Arkansas Society of Anesthesiologists, 4301 W. Markham, Slot 515, Little Rock, Arkansas 72205, Attn: Ms. Barbara Pitts.

MARCH 30 - APRIL 1

Pediatric Trends. Sponsored by the American Academy of Pediatrics. Waiohai Hotel, Kauai, Hawaii. Sixteen Category I credit hours. Fee: AAP resident/fellow or allied health professionals, \$220; AAP fellow, \$300; non-member physician, \$365. For further course and transportation information, contact CME Registration, Department of Education, American Academy of Pediatrics, Post Office Box 927, Elk Grove Village, IL 60009-0927; or call 1 800-421-0589.

APRIL 1

Medical Office Management. Sponsored by the Pulaski County Chapter of Medical Assistants. St. Vincent's Infirmary - South Auditorium, 8:00 a.m. - 4:00 p.m. .6 CEU's available. Fee: Member, \$79; non-member, \$99. For further information, contact Margie Litton, CMA, North Pulaski Women's Clinic, 1224 Braden, Jacksonville, AR 72076; 982-3461.

APRIL 6-7

Sixteenth Annual Symposium on Obstetrics and Gynecology. Sponsored by Washington University School of Medicine. Washington University Medical Center, St. Louis, MO. Twelve Category I credit hours available. Fee: \$100. Further information: Cathy Caruso, Washington University School of Medicine, Office of Continuing Medical Education, 660 South Euclid, Box 8063, St. Louis, MO 63110; (800) 325-9862.

APRIL 8

Cardiovascular Conclave 1989. Sponsored by Arkansas Cardiovascular Surgery Associates. J. A. Galbraith Conference Center, Baptist Medical

Center. Category I credit available. Further information: Patricia Pollack, (501) 224-5666.

MAY 3-5

Celebrate in New Orleans: New Cardiovascular Interventions. Sponsored by the Cardiovascular Institute of the South. Further information: Jane Arnette, Cardiovascular Institute of the South, 300 Liberty, Houma, LA 70360; (800) 525-8777.

MAY 4-6

Magnetic Resonance Technologist Seminar for MR Technologists. Sponsored by Siemens Medical Systems. Sawgrass Marriott Resort, Ponte Vedra Beach, FL. ECE points available. Registration fee: \$250. Further information: Siemens MR Product Group, (201) 321-3261.

MAY 11-14

Helping Patients Feel Better, Live Longer: Emerging Standard of Care for the 1990's. Sponsored by the American College of Advancement in Medicine. Dallas Hyatt Regency, Reunion, TX. Fifteen and one-half Category I credit hours. Further information contact, ACAM, 23121 Verdugo Drive, Suite 204, Laguna Hills, CA 92653; 1 (800) 532-3688.

MAY 12-13

Second Annual Contact Lens Course. Sponsored by Washington University School of Medicine. Washington University Medical Center, St. Louis, MO. Seven and one-quarter Category I credit hours available. Fee: \$100. Further information: Cathy Caruso, Washington University School of Medicine, Office of Continuing Medical Education, 660 South Euclid, Box 8063, St. Louis, MO 63110; (800) 325-9862.

MAY 18-20

Advances in Pediatrics. Sponsored by the American Academy of Pediatrics. Mariner's Inn, Hilton Head Island, South Carolina. Sixteen Category I credit hours. Fees: AAP Resident Fellow or Candidate Fellow, \$220; AAP Fellow, \$300; Non-member physician, \$365.00; Allied Health Professional, \$220. Further information: CME Registration, Department of Education, AAP, Post Office Box 927, Elk Grove Village, IL; 1 (800) 421-0589.

Current Approach to Therapy of Angina Pectoris

March 21, 7:00 p.m. Presented by Mark A. Levinson, M.D. Sponsored by Baxter County Regional Hospital CME Program. Education Building, Baxter County Regional Hospital, Mountain Home. Two Category I credit hours. Further information: Chuck Riley, R.N., CME Coordinator, 624 Hospital Drive, Mountain Home, AR 72653; (501) 425-1446.

Nitrates & Angina

March 22, 12:00 noon. Presented by Frank McGrew, M.D. Sponsored by AHEC - Fort Smith. Fourth Floor Conference Room, Sparks Regional Medical Center. One Category I credit hour.

Infectious Disease Update

March 27-28, 7:30 a.m. - 12:00 noon each day. Presented by Richard Jacobs, M.D., Terry Yamauchi, M.D., and Russell Steele, M.D. Co-sponsored by Arkansas Children's Hospital Continuing Education Program and UAMS Continuing Education for Physicians. Sheraton Hot Springs, Lakeshore Resort. Eight Category I credit hours. Fee: \$80. Further information: Blanche Moore, Director of Continuing Education, ACH, 800 Marshall, Little Rock, Arkansas 72202-3591.

Tumor Conference

March 28, 12:00 noon. Presented by Randal Bowlin, M.D. Sponsored by AHEC - Fort Smith. Fourth Floor Conference Room, Sparks Regional Medical Center. One Category I credit hour.

Symposium on Critical Care Medicine

March 29 - April 1. Presented by Milton D. Deneke, M.D. and Terry Yamauchi, M.D. Sponsored by the University of Tennessee College of Medicine, Memphis and UAMS Continuing Education for Physicians. Hilton Hotel, Hot Springs. Credit hours available: 11.25 PRA, AAFP, 22 ACEP. Fee includes course materials and breaks: \$175, physicians; \$100, residents and students. Further information: University of Tennessee, Memphis; Office of Continuing Medical Education, 800 Madison Ave., Memphis, TN 38163; (901) 528-5547.

24th Annual Surgical Symposium

March 31 - April 2. Sponsored by the University of Arkansas Department of Surgery, Office of

Continuing Education for Physicians, and the Arkansas Chapter of the American College of Surgeons. Arlington Hotel, Hot Springs. Seven Category I credit hours. Fee: \$25, ACS member, \$25; non-member, \$75.

Medical Office Management

April 1, 8:00 a.m. - 4:00 p.m. Sponsored by the Pulaski County Chapter of Medical Assistants. St. Vincent's Infirmary - South Auditorium, .6 CEU's available. Fee: Member, \$79; non-member, \$99. Further information: Margie Litton, CMA, North Pulaski Women's Clinic, 1224 Braden, Jacksonville, AR 72076; 982-3461.

Religious Beliefs & Medicine

April 6, 12:30 p.m. Presented by Reverend True Man Moore. Sponsored by AHEC-Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Internal Medicine

April 11, 12:30 p.m. Presented by L. C. Price, M.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

OB Lecture Series

April 12, 1:00 - 2:00 p.m. Presented by William Harrison, M.D. Sponsored by AHEC - Northwest. 241 West Spring, Fayetteville. One Category I credit hour.

Children & Family Services

April 18, 12:30 p.m. Presented by Sara Ernst. Sponsored by AHEC-Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Pediatric Cardiology

April 19, 12:00 noon. Presented by the staff of Arkansas Children's Hospital. Sponsored by AHEC - Fort Smith. Seventh Floor Dining Room, Sparks Regional Medical Center. One Category I credit hour.

Health Care for an Aging Society: Planning for the Twenty-First Century

April 27-29, time to be announced. Presented by the UAMS Division of Medical Humanities and Chris Hackler, Ph.D. Sponsored by UAMS Office

of Continuing Education for Physicians. University Conference Center, Excelsior Hotel. CME Credit and fees to be announced.

Internal Medicine

May 2, 12:30 p.m. Presented by L. C. Price, M.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

The Nursing Profession

May 3, 12:30 p.m. Presented by Mary Stoglin, MSN. Sponsored by AHEC-Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Emergency Medicine Update

May 4-5, time to be announced. Sponsored by Baptist Medical Center. J. A. Gilbreath Conference Center. Further information: Baptist Medical Center Medical Education, 227-2672.

Cholesterol & Coronary Disease, Reducing the Risk

May 9, 12:00 noon. Presented by Wayne Peters, M.D. Sponsored by AHEC-Fort Smith. Seventh Floor Dining Room, Sparks Regional Medical Center. One Category I credit hour.

Treatment of Serious Infections in Children

May 16, 7:00 p.m. Sponsored by the Baxter County Regional Hospital CME Program. Baxter County Regional Hospital Education Building, Mountain Home. Two Category I credit hours. Further information: Chuck Riley, R.N., CME Coordinator, 624 Hospital Drive, Mountain Home, AR 72653, (501) 425-1446.

Tumor Conference

May 17, 12:00 noon. Presented by Bill Stein-siek, M.D. Sponsored by AHEC - Fort Smith. Fourth Floor Conference Room, Sparks Regional Medical Center. One Category I credit hour.

Recurring Education Programs

As organizations accredited for continuing medical education by the Arkansas Medical Society, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), each Friday, 12:15 p.m., Conference Room, Building 1, VAMC
Mortality/Morbidity Conference, fourth Wednesday, 2:45 p.m., Conference Room, Building 1, VAMC

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon, varying topics, alternating Fridays, 12:30 p.m., Classrooms, AMI National Park Medical Center

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 12:00 noon, Second Floor Classroom
General Pediatrics Seminar, first and third Friday, 12:00 noon, Second Floor Classroom
Genetics Conference, each Wednesday, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Pediatric Grand Rounds, each Tuesday, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Second Floor Classroom
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Sturgis Building, Rooms S120-121
Problem Case Conference, second and fourth Friday, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium. A meal is provided.
Cancer Conference, third and fourth Thursday, 12:00 noon, Southwestern Bell Room A meal is provided.
General Medicine Journal Club, each Tuesday, 12:00 noon, Conference Room 1. A meal is provided.
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library. A meal is provided.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Arkla Room. Refreshments are provided.
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory. Refreshments are provided.
Pediatric Conference, first Tuesday, 12:30 p.m., Vincent de Paul Room. A meal is provided.
Peripheral Vascular Disease Conference, fourth Tuesday, 6:00 p.m., Arkla Room. A meal is provided.
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, Southwestern Bell/Arkla Rooms. A meal is provided.

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1

GI Conference, third Thursday, 12:00 noon, Conference Room 1.

Grand Rounds Conference, each Wednesday, 12:00 noon, Conference Room 1. Lectures and case presentations. A light lunch is provided.

Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library

Pulmonary Conference, each Tuesday, 12:00 noon, Shuffield Auditorium. A light lunch is provided.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES - LITTLE ROCK

ACRC/CARTI Tumor Conference, each Wednesday, 12:00 noon, CARTI, Markham & University

ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137

Anesthesia Conference Series, times and dates vary, UAMS Education Building, Room G/110 A&B

Anesthesia Morbidity and Mortality Conference, every second and fourth Tuesday, 6:45 a.m., UAMS Education Building, Room G/110 A&B. Every first, second and third Thursday, 4:00 p.m., Room G/112 A&B.

Child Psychiatry Clinical Case Conference, first Friday, 1:00 p.m., UAMS Child Study Center Conference Room.

Interdisciplinary Gynecologic Cancer Conference, each Friday, 12:30 p.m., UAMS Education Building, Room G106 A&B

Medicine Grand Rounds, each Thursday, 12:15 p.m., UAMS Shorey Auditorium

Medicine Research Conference, each Wednesday, 4:30 p.m. Shorey Building, Room 3506

Neurology Clinical Case Conference, three or four Thursdays per month, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.

Neuropathology Conference, every Tuesday, 4:00 p.m. Rotates between UAMS (7D33) and LRVAMC (Autopsy Room).

Neuroscience Conference (Basic), second, third, and fourth Monday, 8:00 a.m., UAMS 7D33.

Ob/Gyn Grand Rounds, each Wednesday, 7:30 a.m., UAMS Education Building, Room G/131B

Ophthalmology Problem Case Conference, each Thursday, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150.

Orthopaedic Basic Science Conference, occasional Tuesdays, 11:00 a.m., UAMS Education Bldg., Room B/135.

Orthopaedic Bibliography Conference, each Tuesday, 8:30 a.m., UAMS Education Building, Room B/135

Orthopaedic Fracture Conference, each Tuesday, 7:30 a.m., UAMS Education Building, Room B/135

Orthopaedic Grand Rounds, each Tuesday, 10:00 a.m., UAMS Education Building, Room B/135

Psychiatry Grand Rounds/Clinical Case Conference, each Friday, 11:00 a.m., UAMS Shorey Auditorium

St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building, Room 159

Surgery Grand Rounds, each Monday, 5:00 p.m., UAMS Education Building, Room G/141A

Surgery Morbidity and Mortality Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A.

Surgery Resident Case Conference, each Wednesday, 5:00 p.m., UAMS Education Building, Room G/141A

Surgery Review Conference, each Monday, 6:00 p.m., UAMS Education Building, Room G/141A

Urologic Topics (Resident Presentation), once or twice monthly, 5:00 p.m., UAMS

Urology Grand Rounds, twice monthly, 5:00 p.m., VAMC

Urology Morbidity and Mortality Conference, last Wednesday, 5:00 p.m., UAMS

Uro-Radiology Workshop (Urologic Imaging), first Thursday, 5:00 p.m., UAMS

VA Diagnostic Imaging Conference, every Tuesday, Wednesday and Thursday, 8:00 a.m., LRVA Nuclear Medicine Conference Room, Room 1D173

VA Medical Service Teaching Conference, each Thursday, 8:00 a.m., NLRVA, Building 66, Room 38

VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., NLRVA Building 89, Conference Room, or Arkansas Rehab Institute

VA Surgery Grand Rounds, each Thursday, 12:45 p.m., VAMC, Room 2D109

VA Surgery Service General Chest Topics (Combined Surgery/Medicine Lung Conference), every other Monday, 12:15 p.m., LRVA, Room 2D109.

VA Surgery Service Lung Cancer Conference, every Tuesday, 3:00 p.m., LRVA, Room 2E142.

VA Topics in Rehabilitation Medicine, each Thursday, 7:45 a.m., NLRVA Conference Room, Building 89L

VA Weekly Tumor Conference, each Tuesday, 1:00 p.m., VAMC, Room 2D109

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.

Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital

Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas

Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas

Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas

Pediatric Conference, third Friday, 12:15 p.m., Union Medical Center.

Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas

Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas

Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

Cardiology Lecture Series, first Monday, 1:00 p.m., Washington Regional Medical Center

City Hospital Staff Meeting, second Friday, 12:00 noon, Fayetteville City Hospital

Family Medicine Conference, varying dates through March, April, and May, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville. Contact AHEC - NW for list of dates.

Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, every four months, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, MO
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
Neurological-Neurosurgical Conference, first Monday, 12:00 noon, St. Bernard's Dietary Conference Room
Neuroradiology Conference, second Friday, 12:00 noon, St. Bernard's Dietary Conference Room
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.
Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room

PINE BLUFF-AHEC

Behavioral Science Conference, first and third Thursday, 12:00 noon, Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, first and fourth Tuesday, 12:00 noon, Jefferson Regional Medical Center
Geriatrics Conference, third Friday, 12:00 noon, Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:00 noon, Jefferson Regional Medical Center
Obstetrics / Gynecology Conference, second Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, second and fourth Thursday, 12:00 noon, Jefferson Regional Medical Center.
Pediatric Conference, third Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, fourth Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Surgery Conference, first Friday, 12:00 noon, Jefferson Regional Medical Center
Tumor Conference, first Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC

Cardiology Conference, each Friday, 12:00 noon, alternates between St. Michael Hospital and Wadley Regional Medical Center
Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital.
Cine Radiology, second Friday, 12:00 noon, Wadley Regional Medical Center.
Echo-Cardiology, fourth Friday, 12:00 noon, Wadley Regional Medical Center
Internal Medicine Conference, second Tuesday, 12:00 noon, alternates between St. Michael Hospital and Wadley Regional Medical Center
Neuro-Radiology Conference, second and fourth Wednesday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Surgeons Pathology Conference, second Tuesday, 7:00 a.m. breakfast, Wadley Regional Medical Center
AHEC Tumor Conference, first Wednesday, 7:00 a.m. breakfast, St. Michael Hospital

**If there's a pain in your
chest, be a pain in the neck.**

Complain to a doctor.

Chest pain could be a sign of heart disease. The sooner
you see your doctor, the better your chances for life.



American Heart Association
WE'RE FIGHTING FOR YOUR LIFE



AMS NEWSMAKERS

Charles A. Ledbetter, M.D., a Harrison orthopaedic surgeon, was inducted recently into the Board of Councilors of the American Academy of Orthopaedic Surgeons at its annual meeting in Las Vegas.

James H. Arkins, M.D., a Bentonville family practitioner, has been appointed to the Bank of Bentonville board of directors.

Marcia Lynn Hixson, M.D., of Little Rock, was inducted as a fellow of the American Academy of Orthopaedic Surgeons at the association's recent meeting in Las Vegas, Nevada. Dr. Hixson was one of 520 new fellows inducted.

Springdale Memorial Hospital has recently named new staff members. **Vincent Runnels, M.D.**, a neurosurgeon, has been elected as chief of staff. **T. Stephen Shaddox, M.D.**, will serve as vice chief of staff. He is a urologist. **Norman G. Tubb, M.D.**, a family practitioner, will be secretary.

The Nashville Chamber of Commerce presented its Man of the Year award to **John Hearnberger, M.D.** Dr. Hearnberger is a surgeon in Nashville.

Henry Hollenberg, M.D., can now add "author" as one of his many accomplishments. Dr. Hollenberg has had his book entitled, "The Hollenbergs: Five Generations in the USA," published recently. The book details his family's genealogy, beginning with an ancestor in Osnabruck, Germany.

Dr. Ducote Haynes, was a guest speaker at the recent Searcy Rotary Club meeting. Dr. Haynes spoke about the procedures involved in treating cancer through radiation.

Jerry Morgan, M.D. will be retiring after 22 years of family medicine, 21 of which have been at the Stuttgart Medical Clinic. A reception in his honor was recently held at the Stuggart Country Club.

AMI National Park Medical Center named its new medical staff officers recently. **Robert F. McCrary Jr., M.D.**, a nephrologist, will be chief of staff. The new vice chief of staff is **Richard**

Gardial, M.D., a family practitioner. Secretary for the Medical Center is **Brenda N. Powell, M.D.**, an obstetrician and gynecologist.

George Jackson, M.D., chief of staff of the Baptist Memorial Hospital - Eastern Ozarks at Cherokee Village, talked with the Kiwanis Club of Horseshoe Bend about the dangers of heart attacks and new developments in the prevention and treatment of heart attacks.

James Maupin, M.D., a family practitioner in Dardanelle, has been reappointed by Governor Bill Clinton to the State Health Board for a term which will expire in 1992. Maupin was the board president in 1982 and was reappointed by Clinton in 1985.

The Arkansas State Medical Board's newest member is **Asa Crow, M.D.** Dr. Crow replaces Dr. B. D. Raney of Jonesboro. Dr. Crow is a family practitioner in Paragould.

The Arkansas Methodist Hospital's new chief of staff is **C. Mack Shotts, M.D.**, a family practitioner in Paragould. Dr. Shotts has been elected to a one-year term.

Dr. Hampton Roy, a Little Rock ophthalmologist, has donated his collection of nautical books, journals and videotapes to the Arkansas Tech University Library. Dr. Roy has been involved in sailing for 15 years.



Merlin James, a.k.a. General Patton, exchanged greetings with Governor Clinton who was among the attendees at the AMS Legislative Reception held in conjunction with the "Day at the Capitol" activities. More than three hundred legislators, physicians, and their spouses enjoyed the General's commentary about the state of medicine (and legislators) in Arkansas.

NEW MEMBERS

BENTON COUNTY MEDICAL SOCIETY

Youngblood, Thomas H., Pediatrics, Rogers. Born August 19, 1958, Houston, TX. Pre-medical education, Austin College, Sherman, TX, B.A., 1981. Medical education, University of Texas Medical Branch, Galveston, 1985. Internship/residency, Shands Hospital, University of Florida, Gainesville, FL. Practice experience, 1 year, Rogers, AR. Board eligible.

BOONE COUNTY MEDICAL SOCIETY

Dunaway, Geoffrey L., Family Practice, Harrison. Born November 27, 1951, Conway, AR. Pre-medical education, University of Central Arkansas, B.S., 1975. Medical education, University of Arkansas for Medical Sciences, 1979. Internship/residency, Washington Regional Medical Center, Fayetteville. Practice experience, 7 years, Harrison, AR. Board certified. Member, AAFP.

CRAIGHEAD-POINSETT COUNTY MEDICAL SOCIETY

Savage, Patrick J., Pulmonary Disease/Internal Medicine, Jonesboro. Born January 21, 1949, Detroit, MI. Pre-medical education, University of Missouri, Columbia, B.A., 1971. Medical education, Medical College of Virginia, Richmond, 1975. Internship, USAF Medical Center, Scott AFB, IL. Residency, USAF Medical Center, Keesler AFB, MS. Military record, USAF, 1971-86. Practice experience, USAF Medical Center, Keesler, MS, 5 years; Texas City, Galveston, Webster, TX, 3 years. Board certified, ABIM. Member, AMA, ACCP (Fellow), ACP (Fellow), ATS, Texas Medical Association.

Skaug, Phyllis E., Pediatrics, Jonesboro. Born February 8, 1947, McAllen, TX. Pre-medical education, Baylor University, B.S., 1969. Medical education, Texas Tech School of Medicine, 1977. Internship/residency, UAMS. Practice experience, 8 years. Board certified. Member, AAP (Fellow).

Stewart, Mark L., Dermatology/Pediatrics, Jonesboro. Born November 18, 1949, Riverside, CA. Pre-medical education, Texas Tech University, B.S., 1972. Medical education, University of Alabama, Birmingham, 1975. Internship, USAF Medical Center, Travis AFB. Residency, University of New Mexico, Albuquerque. Practice experience, 2 years, USAF Medical Center, Travis AFB; 3 years, Zweibrucken AB, Germany; 3 years, Kirkland AFB, Albuquerque, NM; 2 years, University of New Mexico; 1 year, Las Vegas Skin and Cancer University. Board certified.

PULASKI COUNTY MEDICAL SOCIETY

Kuykendall, Robert C., Cardiovascular and Thoracic Surgery, Little Rock. Born October 11, 1953, Tulsa, OK. Pre-medical education, Vanderbilt University, B.S., 1976. Medical education, Vanderbilt University School of Medicine, 1980. Internship/residency, University of Texas Medical School, Houston. Board certified.

Roberts, Thomas S., Orthopedic Surgery, Little Rock. Born April 22, 1956, New Orleans. Pre-medical education, Louisiana Tech University, Ruston, B.A., 1978. Medical education, Louisiana State University, Shreveport, 1982. Internship/residency, University of Arkansas for Medical Sciences. Board certified.

Yocum, John H., Orthopedic Surgery, Little Rock. Born November 22, 1956, El Dorado. Pre-medical education, Vanderbilt University, Nashville, B.S., 1979. Medical education, University of Arkansas for Medical Sciences, 1983. Internship/residency, University of Louisville School of Medicine, Louisville, KY. Board eligible.

SALINE COUNTY MEDICAL SOCIETY

Cheadle, Matt G., Pediatrics, Benton. Born June 23, 1955, Little Rock. Pre-medical education, Arkansas State University, Jonesboro, B.S., 1981. Medical education, University of Arkansas for Medical Sciences, 1985. Internship/residency, UAMS. Board eligible.

SEBASTIAN COUNTY MEDICAL SOCIETY

Ennen, Randy M., Ophthalmology, Fort Smith. Born December 12, 1956, Buffalo Center, IA. Pre-medical education, Cornell College, Mt. Vernon, IA and University of Iowa, B.S., 1980. Medical education, Washington University, 1984. Internship/residency, University of Missouri. Board eligible.

Jaggers, Robert C., Cardiovascular & Thoracic, Fort Smith. Born February 5, 1954, Houston, TX. Pre-medical education, Baylor University, B.S., 1976. Pre-medical education, University of Texas, Houston, 1979. Internship/residency, Baylor University College of Medicine. Practice experience, 1 year, University of Kentucky. Board certified.

WASHINGTON COUNTY MEDICAL SOCIETY

Bailey, Scott A., Obstetrics & Gynecology, Fayetteville. Born January 6, 1957, Little Rock.

Pre-medical education, University of Central Arkansas, B.S., 1979. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/residency, Memorial Medical Center. Board eligible.

Hall, Benjamin H., Family Practice, Lincoln. Born February 1, 1951, Fayetteville. Pre-medical education, Hendrix College, Conway, 1973. Medical education, University of Arkansas for Medical Sciences, 1980. Internship/residency, McKay Dee Hospital, Ogden, Utah. Practice experience, 4-1/2 years, Prairie Grove, AR and Lincoln, AR. Board certified. Member, AAFP, AMA, AOA.

McNair Jr., William R., General Surgery, Fayetteville. Born November 25, 1945, Fayetteville. Pre-medical education, University of Arkansas. Medical education, University of Arkansas for Medical Sciences, 1971. Internship, University Hospital. Residency, Veterans Administration Hospital. Practice experience, 10 years, Fayetteville. Board certified.

RESIDENT SECTION

Cross Jr., J. Thomas, Pediatrics. Born August 27, 1961, Little Rock. Pre-medical education, Tulane, New Orleans, B.S., 1983. Medical school, Tulane, New Orleans, 1988. Internship, UAMS.

Greene, Lyndon R., Anesthesiology. Born December 9, 1960, Winn Parish, LA. Pre-medical education, Louisiana State University, Shreveport, B.S., 1982. Medical education, LSU, New Orleans, 1987. Internship, UAMS.

Holzman, Steven, Surgery. Born January 18, 1962, Houston. Pre-medical education, University of Texas, Austin, B.A., 1983. Medical education, University of Texas, Houston, 1988. Internship, UAMS.

Miller, Jana R., Psychiatry. Born March 23, 1960, Little Rock. Pre-medical education, Texas Tech, B.S. Medical education, Texas Tech, 1987.

Rader, George R., Anesthesiology. Born September 9, 1961, Little Rock. Pre-medical education, University of Dallas, Irving, B.S., 1983. Medical education, UAMS. Internship, UAMS.

Stansell, Cynthia A., General Surgery. Born April 1, 1960, Little Rock. Pre-medical education, University of Arkansas, Little Rock, B.A., B.S., 1983. Medical education, UAMS, 1988.

Tahiri, Abdalla A., Internal Medicine. Born January 1, 1955, Dire Dawa, Ethiopia. Pre-medical education, Philander Smith College, 1979. Medical education, UAMS. Internship, UAMS.

Whitaker, John C., Pediatrics. Born March 7, 1960, Harrison. Pre-medical education, University of Arkansas, Fayetteville, B.S., 1982. Medical education, UAMS. Internship, UAMS.

IN MEMORIAM

DR. RAYMOND C. COOK

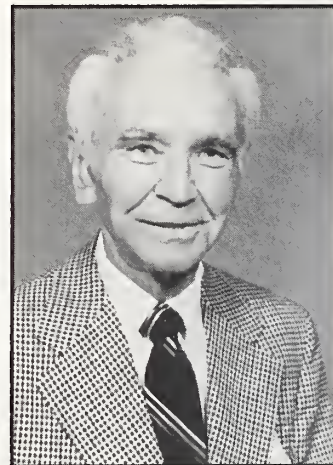
Dr. Raymond C. Cook, age 85 years, a retired Little Rock ophthalmologist, died in Seattle, Washington, on February 1. Dr. Cook retired from the practice of medicine at Little Rock in 1981, and had lived with his family in Seattle for three years.

He was born near Conway, AR, a son of the late Henry Edward and May Brown Cook. At age 17 he entered Arkansas State Normal School at Conway (now the University of Central Arkansas) from which he graduated with an A.B. degree. In the fall of 1925 he entered medical school at the University of Arkansas, graduating in the fall of 1929 with an M.D. degree. He interned at Grady Memorial Hospital in Atlanta, Georgia. Shortly thereafter he started his residency in ophthalmology at the Memphis Eye, Ear, Nose and Throat Hospital. After completing residency training in 1935 he returned to Little Rock, opened his private office, and assisted at the University of Arkansas Medical Center's Department of Ophthalmology. In 1937 he studied at the Royal London Ophthalmic Hospital, the University of Vi-

enna Eye Clinic, and the Budapest Eye Clinic. In 1942 he joined the U. S. Navy and served with distinction until 1946, attaining the rank of Commander. When he returned to Little Rock, he continued his association with the medical school.

Dr. Cook was president of the Pulaski County Medical Society in 1953 and was ap-

pointed Chief of Staff at Baptist Medical Center in 1959. In 1972 he was awarded a Clinical Professorship in the department of Ophthalmology at the College of Medicine, after serving 36 years in the department. He was the ophthalmologist for the Rehabilitation Center in Fair Park and for the Arkansas School for the Blind for a number of years.



In the late 1960's Dr. Cook was instrumental in raising funds to modernize the Eye Clinic at the Department of Ophthalmology of the University of Arkansas College of Medicine, providing a great deal of equipment, some of which is still in use.

In recognition of his many years of service to the medical school and state, the Board of Trustees for the University of Arkansas on January 20, 1984, es-

tablished the Raymond C. Cook Endowed Lectureship in the Department of Ophthalmology, College of Medicine.

Dr. Cook was a member of the First Christian Church in Little Rock.

He is survived by his daughter, Mrs. Charles (Eleanor) Cook Nolan of Seattle; a brother, Granville M. Cook of Russellville; and four grandchildren.

DR. GWILYM AUSTIN EDWARDS

Gwilym Austin Edwards, M.D., of Hot Springs Village, died Sunday, January 15, 1989. He was 78.

Dr. Edwards, a retired otolaryngologist, was an emeritus member of the Arkansas Medical Society and the Garland County Medical Society.

Dr. Edwards is survived by his wife, Mary Ellen "Mimi" Edwards of Hot Springs Village; a brother Dr. Thomas Edwards of Florida; two sisters, Jane Thompson of West Virginia and Katie Dumm of Ohio; and two grandchildren.

DR. BOBBY EARL MCKEE

Bobby Earl McKee, M.D., a Jonesboro ophthalmologist, died Tuesday, February 21, 1989. He was 56.

Dr. McKee was a 1959 graduate of the University of Mississippi School of Medicine. He was a member of the American Medical Association, the Arkansas Medical Society and the Craighead-Poinsett County

Medical Society. He was a supporter and benefactor of the Arkansas State University museum.

Survivors are his wife, Mrs. Rose McKee of Jonesboro; a daughter, Miss Virginia McKee of Atlanta; two sons, Sanders McKee of Memphis and John McKee of Jonesboro; and his mother, Mrs. Frances McKee of Jonesboro.

DR. CHARLES NORMAN MCKENZIE

Charles Norman McKenzie, M.D., age 59, died Tuesday, February 21, 1989. He was an orthopaedic surgeon in Little Rock.

Dr. McKenzie was a graduate of Henderson State University in Arkadelphia and the University of Arkansas College of Medicine, where he received his M.D. in 1959. He was the first orthopaedic intern at St. Vincent Infirmary and later became chief of orthopedics at Fort Bragg, NC.

He was a fellow of the American College of Surgeons and the Academy of Orthopedic Surgery. He was appointed to the Commission on Alcohol and Drug Abuse Prevention by former Gov. Frank White and later helped establish an endowed chair in alco-

hol and drug abuse prevention education at the University of Arkansas for Medical Sciences.

Dr. McKenzie was a member of the Pulaski County and Arkansas Medical Societies as well as the Southern and American Medical Associations. He was the volunteer physician for the Hall High School football team for 18 years and a member of the Little Rock Rotary Club.

Dr. McKenzie is survived by his wife, Nancy Hundley McKenzie; a son, Dr. James Marshall McKenzie of Hazen; two daughters, Anne McKenzie of Arlington, TX; and Dr. Mary Elizabeth McKenzie of Terre Haute, IN; his mother, and two sisters, Ann Roop of Stuttgart and Mary Edwards of Coy.

Memorials honoring Arkansas Medical Society members and their families can be made to the Medical Education Foundation for Arkansas (MEFFA), Post Office Box 5776, Little Rock, Arkansas 72215.

RESOLUTIONS

Whereas, the members of the Pulaski County Medical Society note with sincere sorrow the recent death of an esteemed colleague, Raymond C. Cook, M.D., and

Whereas, Dr. Cook was a loyal member of the Society for fifty-three years and served in numerous positions of leadership including the office of President in 1953, and

Whereas, he generously devoted his time and energy toward the betterment of his patients and his community, as evidenced by his many years of service to the Arkansas School for the Blind, therefore be it

RESOLVED, that this resolution be adopted and made a part of the permanent archives of the Society, and

RESOLVED, that a copy be sent to Dr. Cook's family to convey our deepest sympathy, and

RESOLVED, that a copy be made available to the *Journal of the Arkansas Medical Society* for publication.

By Order of the Memorials Committee

Marlon Doucet, M.D., Chairman

Henry Hollenberg, M.D.

Robert Watson, M.D.

Adopted Unanimously

Executive Committee

February 15, 1989

"Drew County Arkansas History of Medicine"

The Drew County Historical Museum is pleased to announce the availability of a new publication, "Drew County Arkansas, History of Medicine" written by Dr. and Mrs. Johnnie Porter Price. The 230-page soft cover book includes a historical perspective of 100 years of medicine in Drew County and over 160 biographical sketches of the physicians of the county, some dating as far back as 1804.

To purchase the book, make your check or money order for \$26.50 (\$25.00 purchase price and \$1.50 postage and handling) payable to Drew County Historical Museum, 404 South Main, Monticello, AR 71655; (501) 367-7446 or you can contact Mrs. J. P. Price, 232 South Main, Monticello, AR 71655; (501) 367-5100.

AMS Committee on AIDS

William N. Jones, M.D., Chairman

Update: April, 1989 The Immunopathogenesis of Human Immunodeficiency Virus

Gregory P. Melcher, MAJ., U.S.A.F., M.C.*

Introduction

The first reports of unusual opportunistic infections such as *Pneumocystis carinii* pneumonia and malignancies such as Kaposi's sarcoma occurring in previously healthy young men were reported to the Centers for Disease Control in the summer of 1981. Shortly thereafter, cases were reported of chronic lymphadenopathy and diffuse undifferentiated non-Hodgkins lymphomas among homosexual males. The common thread linking these seemingly disparate case reports was a profound immunodeficiency, and the clinical syndrome was labeled the acquired immunodeficiency syndrome (AIDS).

An observation was made in the first published report of the clinical manifestations of AIDS that T-helper lymphocytes, bearing the CD4 antigen, were markedly reduced in number or absent from the peripheral blood of these patients. Subsequent investigations have confirmed that the T-helper cell is the primary target for the human immunodeficiency virus (HIV). Depletion of the T-helper cell population is apparently the single most important event of HIV infection. Essential to an understanding of the immunodeficient state created by HIV infection is a knowledge of the key role the T-helper cell plays in immune regulation.

Role of T-Helper Cells in Immune Function

The role of the T-cell in the immune system is similar to the role of the conductor in an orchestra (Table I). Functional T-cells are essential for a systematic and synchronized response to foreign antigens.¹ Accessory processing cells

such as monocyte-macrophages present antigens to resting T-cells which, under the influence of monocyte-macrophage derived cytokines [i.e., interleukin-1 (IL-1)], are stimulated to express surface receptors for interleukin-2 (IL-2). IL-2 as secreted by T-cells has autocrine activity inducing proliferation and differentiation into functional T-cell subsets with helper, suppressor and cytotoxic functions. Among other functions of IL-2 is the stimulation of natural killer cells to exhibit cytotoxic function. Proliferating T-cells release other cytokines including interferon-gamma, IL-2, B-cell activating factors, and B-cell growth factors, some of which are necessary for the development of activated macrophages, activated cytotoxic T-cells, natural killer cell function and B-cell growth and differentiation. Thus it is not surprising that the functional impairment and quantitative depletion of T-helper cells by HIV is associated with a state of profound immunosuppression.

The Mechanism of HIV Infection

Many researchers across the world have supplied pieces to the puzzle of how HIV infects T-helper cells. Once the etiologic agent of AIDS was discovered in 1984, it was soon

Table I. T-Helper Cell Modulation of the Immune Response

- Upregulation of T-cell interleukin-2 (IL-2) receptor expression
- Autocrine activity of IL-2 to promote T-cell proliferation and differentiation
- IL-2 stimulation of natural killer (NK) cells, B-cells and cytotoxic T-cells
- Secretion of B-cell growth factor
- Secretion of B-cell differentiation factor
- Interferon-gamma induced stimulation of macrophages, activated cytotoxic T-cells, B-cells and NK cells.

Section of Infectious Diseases/SGHMMI, Wilford Hall U.S.A.F. Medical Center, Lackland AFB, Texas 78236-5300. The views expressed herein are those of the author and do not necessarily represent the views of the U.S.A.F. or the Department of Defense.

determined that the T-cell defining cell membrane bound protein CD4, used to identify the T-helper subset was also the binding site for the virus. Subsequent experiments utilizing digests (restriction fragments) of viral DNA to produce recombinant mutants of the viral envelope have demonstrated that binding occurs between the gp-120 envelope protein and the CD4 receptor, in association with T-cell surface expressed HLA-DR class II histocompatibility antigen.² After binding, the virus is internalized, uncoated, and the viral RNA genome is transcribed to DNA by the viral enzyme, reverse transcriptase. Proviral DNA is integrated into the host genome by a viral endonuclease. The infection then enters a latent state until the cell is activated, whereupon the proviral DNA transcribes viral genomic RNA and messenger RNA. This results in protein synthesis, processing and assembly culminating in budding of mature virus from the cell surface. The new virions produced are capable of infecting other CD4+ cells, thus propagating the infection. CD4 receptors are expressed on other cells, including monocytes, dendritic cells in the skin, and other antigen-presenting cells. Also, small amount of CD4 receptors are probably expressed on neural glial cells and gut chromaffin cells, allowing direct viral invasion of these organs.

Immunopathogenesis of HIV

The mechanisms by which HIV infection causes quantitative T-helper cell depletion remain unknown (Table II). One postulated mechanism is that viral production and budding creates a massive increase in cell membrane permeability leading to lysis. Another mechanism which occurs in vitro in the spontaneous formation of a large multinucleated giant cells called syncytia, comprising both infected and uninfected cells. This occurs when viral gp-120 envelope molecules are expressed on the surface of an infected cell, which then bind to the CD4 receptors of uninfected cells. This mechanism is supported by studies which demonstrate that only a small percentage of T-helper cells are infected with virus, despite T-helper cell depletion. Others have speculated that autoimmune phenomena mediated by cytotoxic T-cells, natural killer cells or antibody-dependent cellular cytotoxicity (ADCC) may be involved, but their role remains unclear.³

The quantitative depletion of T-helper cells occurs late in the course of infection, probably after several years, and heralds the onset of clinical disease. However, early in the course of infection the virus induces qualitative defects in T-helper cell function (Table II). Despite having normal numbers of T-helper cells, asymptomatic HIV-infected individuals have a defect in the T-helper recognition and response to soluble antigen. These properties are essential for T-helper cell stimulation and amplification of the immunoregulatory network. Although the data are somewhat inconsistent, it appears that early in infection the T-helper cell proliferative response to mitogen stimulation is impaired as well. The mechanism by which HIV induces this hyporesponsiveness in T-helper cells remains unknown.⁴ Prelimi-

Table II. Proposed Mechanisms of Quantitative and Qualitative Immune Suppression induced by HIV

Quantitative depletion mechanisms
Direct viral lysis of T-helper cells
Formation of syncytia
Autoimmune antibody dependent cellular cytotoxicity
Qualitative functional defects
Circulating T-helper suppressor factor
Defective T-helper response to soluble antigen and mitogenic stimulation
Impaired B-cell growth and differentiation
Impaired T-helper cell cytokine (e.g. IL-2, interferon-gamma) production

nary studies from our institution suggest that the gp-120 envelope protein, present in the serum of infected individuals, is responsible for the suppression of T-helper cell proliferation. Further, this suppressive action is present early in the infection and the degree of suppression induced increases with progression from asymptomatic to symptomatic infection.

B-cell function is significantly impaired following infection with HIV. Early in infection, patient sera demonstrates hypergammaglobulinemia which results from polyclonal B-cell activation. It is believed that this phenomenon results from latent infection with polyclonal B-cell activating viruses such as Epstein-Barr virus and cytomegalovirus, both highly prevalent in HIV-infected individuals. HIV also is capable of directly enhancing B-cell growth and differentiation, however it remains unclear if this results in polyclonal B-cell proliferation.³ Despite the heightened activity of B-cells, they are impaired in their ability to respond to specific antigenic stimulation. In part, this is explained by defects in T-helper cell function as outlined above, however other mechanisms remain to be defined. Particularly evident is the inability of B-cells to mount an IgM response following antigenic exposure. This response is important for initial defense against new antigenic challenges as well as for the anamnestic response to antigens which are reintroduced to the host.

Macrophages and monocytes have recently been recognized to play a major role in perpetuating HIV infection.⁵ Some monocytes express CD4 antigen on their cell surface and may be infected by the virus. It is unclear at present whether or not the virus is cytopathic for monocytes as it is for T-helper cells. Thus, the major roles monocytes and macrophages have in the pathogenesis of HIV infection may be to serve as a reservoir for the virus, and as a transport cell to other organs. Recent evidence suggests that HIV is able to replicate in monocytes as well. This has important implications for the neuropsychiatric manifestations of HIV infection, as it has been demonstrated that the major cell type infected with the virus in the brain is the monocyte. Since monocytes circulate throughout the body are major immune surveillance cells in many organs, this may have important

AIDS IN ARKANSAS 1989

January 1 - February 28, 1989

Total number of cases
reported

18

Number of deaths

7

CASES BY SEX

Male

15

Female

3

CASES BY RACE

White

12

Black

6

CASES BY RISK GROUP

Homosexual/Bisexual[#]

6

Homosexual & IV Drug User

4

IV Drug User

6

Hemophiliac

0

Transfusion

0

Heterosexual (Contacts)

1

NIR[#]

1

[#] No identified risk group (NIR)

CASES BY AGE GROUP

Less than 20

1

20 - 29

6

30 - 39

10

40 - 49

1

50 - 59

0

60 or more

0

OPPORTUNISTIC DISEASE

Pneumocystic Carinii

6

Kaposi's Sarcoma

1

Pneumocystis Carinii

and Kaposi's Sarcoma

0

Other Diseases

11

AIDS IN ARKANSAS 1985 - 1989

Total number of cases
reported

191

Number of deaths

113

CASES BY SEX

Male

177

Female

14

CASES BY RACE

White

147

Black

43

Other

1

CASES BY RISK GROUP

Homosexual/Bisexual[#]

114

Homosexual & IV Drug User

32

IV Drug User

23

Hemophiliac

1

Transfusion

9

Heterosexual (Contacts)

8

NIR[#]

4

[#] No identified risk group (NIR)

CASES BY AGE GROUP

Less than 20

3

20 - 29

64

30 - 39

84

40 - 49

27

50 - 59

6

60 or more

7

OPPORTUNISTIC DISEASE

Pneumocystic Carinii

89

Kaposi's Sarcoma

9

Pneumocystis Carinii

and Kaposi's Sarcoma

5

Other Diseases

88

Source: Arkansas Department of Health.

implications for end-organ dysfunction as well as for attempts at treatment of the infection.

Viral induced impairment of T-helper cell cytokine production has widespread impact on immune regulation. IL-2 receptor generation by infected T-helper cells is impaired which diminishes proliferation and differentiation of resting T-cells. Deficient production of IL-2 impairs stimulation of proliferating B- and T-cells as well as activation of cytotoxic T-cells and natural killer (NK) cells. Interferon-gamma production by proliferating T-cells is markedly impaired following HIV infection.⁶ This cytokine acts broadly on macrophages, NK cells, and cytotoxic T-cells to promote killing of intracellular pathogens. Interferon-gamma also contributes to B-cell proliferation and differentiation, enhances accessory cell function for antigen processing/presentation, augments IL-1 secretion by macrophages, and stimulates IL-2 release by proliferating T-cells. Thus it appears that the immune dysregulation which results from HIV infection is more complex than simply depletion of the T-helper cell population, which is a late even in the course of the disease. Certainly, activation of HIV infected CD4-bearing cells, culminating in viral reproduction and cell death, is the critical event in HIV infection since opportunistic infections and neoplasms (except for Kaposi's sarcoma) do not occur until T-helper lymphopenia develops. However, the functional impairment of the T-helper cells earlier in the infection is probably responsible for the decreased responsiveness of asymptomatic HIV-infected individuals to vaccination.

Immunology of the Host Response

A discussion of HIV molecular biology and the development of antibody against various viral gene products is beyond the scope of this paper. This section will focus on recent developments in the understanding of the host immune response which are important for viral inhibition, neutralization or lysis. The implication is that through an understanding of these processes, manipulations of the host immune response may be able to prevent the progression from asymptomatic HIV-infection to clinical AIDS or lead to the development of an effective vaccine.

Discovery of the etiologic agent causing AIDS in 1983 opened the door for examining the host immune response to the virus (Table III). Early studies revealed that many infected individuals possessed high levels of serum antibodies to various viral proteins including envelope, polymerase and core structures. Despite the presence of high titer antibody to core protein p-24, the neutralizing activity was

low. Another early observation was that p-24 antibody levels declined or became undetectable in patients with clinical AIDS when compared to asymptomatic infected individuals. However, the neutralizing capability of p-24 in asymptomatic individuals was no greater than that of AIDS patients. Attention was then turned to antibodies directed against envelope proteins, such as gp-120, gp-41 and the parent protein gp-160. Initially, due to the structural diversity among various strains of HIV envelope protein, the neutralizing antibodies discovered were strain-specific. Utilizing molecular biological techniques, investigators were able to detect amino acid sequences within the gp-120 genome which are highly conserved among viral strains and which demonstrate viral neutralization activity.⁷ The significance of these antibodies in effecting control of the viral infection directly or as markers for vaccine candidates remains to be determined.

Other researchers have investigated the role of cellular cytotoxicity in controlling the infection. Antibody-dependent cellular cytotoxicity (ADCC) activity has been demonstrated in the sera of HIV-infected patients with varying severity of infection. This activity declines as the severity of infection increases, seemingly independent of declines in anti-p24 core antibody levels and CD4+ cell numbers.⁸ It is speculated that ADCC may play a role in preventing the progression from asymptomatic infection to symptomatic infection, but what impairs this control mechanism to allow for disease progression remains unknown.

Lymphocytes which bears the CD8 marker are known as suppressor T-cells, and their main function in immune regulation is to down-regulate T- and B-cell proliferation. It has been shown that CD8+ T-lymphocytes from HIV-infected patients are able to suppress viral reproduction in the patient's own CD4+ T-cells.⁹ Another group has recently demonstrated that cytotoxic lymphocytes bearing CD3+/CD8+ surface markers specific for HIV reverse transcriptase are present in the blood of some infected individuals. This may be important for vaccine development since the gene which codes for HIV reverse transcriptase is highly conserved among different strains.¹⁰

It is apparent that we have learned a great deal about the host immune response to HIV infection. Despite the defined HIV specific response, however, we know that many patients progress to clinical AIDS. Through further investigations into this viral specific host immune response we hope to discover methods of enhancing this response to control the infection and/or develop effective methods of vaccination against this deadly disease.

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Table III. Postulated Host Immune Response Mechanisms for Control of HIV

- Neutralizing antibody
- Antibody-dependent cellular cytotoxicity
- CD8+ T-suppressor lymphocytes
- Cytotoxic T-cells

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The Human Papillomavirus: An Epidemic

*David L. Barclay, M.D.
Obstetrics and Gynecology*

The fact that papillomavirus (PV₁) of animals and man could induce warts, benign tumors of skin or other epithelial tissues that often regress, has been known for generations. The papillomaviruses contain a single circular molecule of double stranded, Desoxyribose nucleic acid (DNA), which is quite small and nonenveloped. The quantity of DNA in a single human cell is 400,000 times greater than that of an HPV. Papillomavirus are a subgroup of the Papovaviruses. Within the papillomavirus subgroup are human and a number of animal papillomaviruses. The most thoroughly studied of these viruses are the bovine and cottontail rabbit types.

Individual papillomavirus types are usually restricted to a single host species and to epithelial cells of skin and mucosal surfaces. Presumably, the nuclei of basal cells are infected and transformed by the virus. Replication occurs in the maturing layers of keratinizing epithelium. Within benign and premalignant lesions, the viral DNA is extrachromosomal, whereas most of the viral DNA within invasive cancers is integrated into the cellular chromosomes. Attempts to propagate HPV in cell culture have not been successful. However, recent advances in molecular biology have made it possible to use cloned DNA₃ to type PV₁. To date, 56 HPV types have been identified.

The lesions commonly associated with various HPV types vary from the common plantar and hand warts to invasive cancers of the cervix, vagina and vulva. HPV types found in human genital lesions include 6, 11, 16, 18, 31, 33, 35, and 39; undoubtedly, additional types will be added to this list. Types 6 and 11 are associated with lower genital condylomata and laryngeal papillomas. Condylomata, with few exceptions, do not progress to cancer and a small percentage will regress within three to six months of initial diagnosis. Most, however, persist and are a reservoir for viral transmission. The majority of HPV type 16 and 18 preinvasive lesions, if left untreated, persist and progress to invasive cancer.

Up to 5% of routine Pap smears demonstrate cytologic evidence of HPV infection of the cervix. An additional 10% and possibly up to 20% of sexually active women age 40 or younger have HPV-DNA in the squamous epithelium lining the lower genital tract, although there is no cytologic or

colposcopic evidence of infection. It is obvious that not nearly that percentage of women will develop a benign or malignant lesion of the lower genital tract. Suggested co-factors are tobacco products, infection by other microbial agents, such as, Herpes simplex or Chlamydia Trachomatis, and immune suppression. It is clinically evident that patients who have undergone a renal transplant with chronic immune suppression, those being treated with corticosteroids for a collagen disease, and patients undergoing adjuvant chemotherapy may develop evidence of lower genital tract HPV infections that are quite refractory to standard treatments. Although the latent period for development of condylomata

The HPV is sexually transmitted; however, recent evidence has indicated that transmission may occur by use of common toilet articles and perhaps even by office instruments.

after initial exposure may be 6 to 8 weeks, it is evident that there may be a prolonged latent period and the virus is only released in the presence of a co-factor. Some investigators have suggested a latency period of up to 30 to 50 years. Studies of tissue adjacent to condylomata or areas of cervical or vulvar dysplasias have identified HPV in cells without manifestations detectable by gross or colposcopic examinations. One would wonder whether or not current treatment methods never completely eradicate the virus.

Genital condylomata are sexually transmitted in the vast majority of cases. It has been estimated that a man with penile cancer or carcinoma in situ places his sexual partner at increased risk of cervical neoplasia. Conversely, it has been reported that 5 - 10% of male partners of women with neoplasia have histological proven penile intra-epithelial neoplasia. It should be suggested that the sexual partner

Considering the inefficiency of virus detection by the cytologic smear from the cervix, one would anticipate that within the near future a yearly examination will include evaluation of the cervix for HPV.

undergo examination of the penis and the perianal skin, using magnification with loops or a colposcope. Examination of the male genitalia is facilitated by wrapping the penis in a gauze dressing soaked in 5% acetic acid. The virus has been identified in the male urethra; however, routine urethroscopy has not been recommended. The vast majority of urethral warts are located within 1 centimeter of the orifice of the urethra in the fossa navicularis. In one series, 80% of current male partners of women with an abnormal Pap smear had penile lesions, most subclinical. Studies of homosexual men have indicated that they are at risk for anal cancer in that squamous cell anal cancer is also associated with a history of genital warts, suggesting that HPV is a causative factor. Although there has been no apparent increase in the incidence of cancer of the penis, this may simply be a reflection of the latent period for virus expression.

The HPV is sexually transmitted; however, recent evidence has indicated that transmission may occur by use of common toilet articles and perhaps even by office instruments. After vaginal examination of an infected patient, could the virus be transmitted to the anal canal during rectal examination?

Considering the inefficiency of virus detection by the cytologic smear from the cervix, one would anticipate that within the near future a yearly examination will include evaluation of the cervix for HPV. But, if the HPV test is positive, what do we do in the absence of an identifiable

lesion? The incidence of squamous and adenocarcinoma of the cervix in young women is increasing as evidenced by reports from Australia, the United Kingdom and the United States. Some of these lesions surface between yearly examinations and are quite virulent. This biologically aggressive behavior is probably related to the type of virus involved; type 16 is currently thought to be the culprit.

It may be that colposcopic examination should be performed for any identified abnormality on cervical cytology. Colposcopic examination of the cervix should also include evaluation of the skin of the vulva, perineum and perianal areas; undoubtedly, HPV infections involved the entire lower genital tract whether one can identify an obvious lesion or not. If a lesion is identified and confirmed by a biopsy, it is recommended that the lesion be destroyed whether it be by surgical removal, cryosurgery, laser vaporization, use of topical 5-Fluorouracil cream, or other means. It is understood, however, that chances are that the virus is not being eradicated, but only the obvious manifestations are being destroyed. During this process, a barrier contraceptive, such as a condom, is recommended until the lesions have cleared. It would seem at times as though women manifesting profuse growth of condylomata respond through their own immunological mechanisms once the bulk of the disease is mechanically destroyed. In the meantime, all we can do is promote prevention through patient education and look forward to the development of a vaccine.

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Surgical Correction of Total Procidentia and Vaginal Vault Prolapse

*David L. Barclay, M.D.**

Introduction

The number of patients undergoing surgical correction of total procidentia or vaginal vault prolapse has increased significantly in recent years and this is probably a result of an aging and more physically active group of women in our society. The uncorrected condition interferes with physical activity and may result in progressive deterioration of urinary tract function.^{1,2} The vaginal mass protrudes well beyond the introitus with standing, causing a sensation of vaginal and pelvic pressure and can in fact interfere with sitting. The surface of the protruding cervical and vaginal mucosa ulcerate causing a bloody and infected discharge (Figure 1). Rupture of a herniated vaginal vault with prolapse of the small intestine has been reported.³ Although stress incontinence is not a problem, incomplete emptying of a large cystocele and urgency incontinence is common.⁴ Progressive hydronephrosis results from prolapse of the trigone through a somewhat tight levator hiatus (Figures 2 and 3). Digital pressure on the posterior vaginal wall or low cleansing enemas are often necessary to empty a large rectocele.

Although most patients are in the postmenopausal age group, an occasional premenopausal patient requires correction. Damage to the pelvic floor secondary to childbirth may be the primary predisposing factor to herniation, perhaps aggravated by tissue relaxation associated with aging and hormonal withdrawal of the menopause. Strenuous exertion and increased abdominal pressure appear to precipitate additional prolapse in patients who have a moderate but asymptomatic defect. Nurses, beauticians, women who do heavy lifting (nursing home or children's colony workers or those caring for disabled relatives at home) are prone to herniation. Disabled patients increase intraabdominal pres-

sure from the exertion required to ambulate. Other predisposing factors appear to be morbid obesity, pelvic mass, anatomical changes secondary to radical vulvectomy, and a suprapubic urethrovesical suspension without correction of other elements of pelvic relaxation (Figures 4 and 5).

The surgical procedure chosen must be individualized and selected for each patient based on the anatomical defect and desire for vaginal function. The primary defect may be anterior wall relaxation with a cystocele, posterior relaxation with a rectocele and enterocele or there may be a mixture of



Figure 1. Total procidentia with ulceration in a patient weighing over 300 pounds.

* 500 South University, Little Rock, Arkansas 72205.

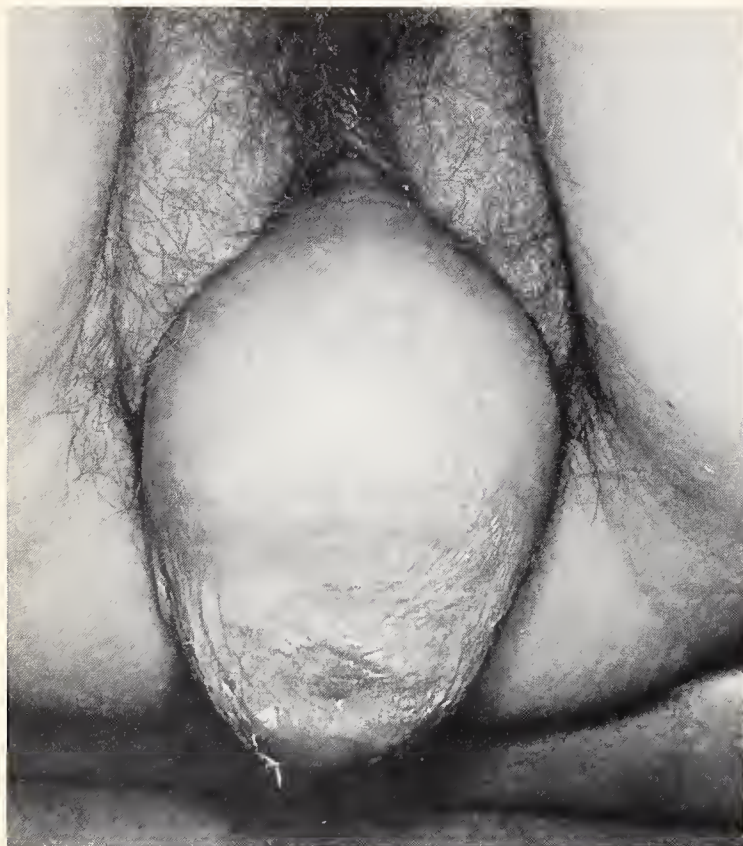


Figure 2. Total procidentia with prolapse of the trigone and hydronephrosis.



Figure 3. Intravenous pyelogram from patient illustrated in Figure 2. The ureters are dilated to a point below the symphysis pubis.

types. If these defects are unrecognized at the time of hysterectomy, there is prompt herniation of the vagina shortly after operation. This is particularly true if a suprapubic urethrovesical suspension has been performed.

In recent years, several investigators - Nichols,^{5,6} Richter,⁷ and Zacharin⁸ to name a few, have delineated the anatomical considerations necessary for corrective surgery. Although a variety of operative procedures have been described, those most commonly used in the United State are: vaginal repairs with vaginectomy,⁹ vaginal vault suspension by transvaginal sacrospinous fixation^{7,10} or transabdominal sacral colpopexy with synthetic material or fascial strip.^{11,12} Total vaginectomy precludes vaginal function, although

lengthening of the canal below the levator muscles by use of a Williams vaginoplasty is a consideration. Sacrospinous fixation and transabdominal sacral fixation serve to reposition the vagina over the levator plate to obviate the explosive force of increased intraabdominal pressure.

Materials and Methods

From September 1978 through December 1987, the author has performed surgery on 148 patients. A vaginectomy was performed on 85 (57%) older patients not wishing to preserve vaginal function and who were primarily concerned with permanent relief of symptoms. Vaginal function was preserved in 40 (27%) patients by transvaginal sacrospinous

Table I. Surgical procedures, average age and postoperative days				
Procedure	Number of patients	Average Age	Postoperative Days	Greater than 10 Postoperative Days
Vaginectomy (range)	85	73 (54-90)	6 (4-21)	5
Sacrospinous Fixation (range)	40	62 (33-75)	6 (3-10)	0
Abdominal Colpopexy (range)	23	57.5 (43-74)	7 (4-19)*	2

* Abdominoperineal resection deleted from average postoperative days.

fixation and 23 (16%) by abdominal colpopexy (Table I). Vaginal pessaries are useful for short term relief of symptoms, but have been found to be of no value for long term management. Their use has been restricted to debilitated nursing home patients where the supervising staff can change the pessary periodically.

Alternate surgical approaches are discussed with each patient and a decision made based on the anatomical defect and desire for vaginal function. Specific indications for a transabdominal colpopexy are a short vagina or indications for abdominal exploration such as an adnexal mass. Abdominal sacral colpopexy has not been performed in conjunction with a hysterectomy.

Considering the average age of these patients, a medical evaluation is indicated. Application of estrogenic vaginal cream for several weeks preoperatively improves the condition of the vaginal mucosa, although, it also increases the vascularity of the tissues. Evaluation of the bladder for capacity, residual urine volume and infection is performed as indicated. If the primary defect is anterior wall relaxation, an intravenous pyelogram is performed in selected patients.

Vaginectomy

Eight-five patients underwent a total vaginectomy, which means that the supralelevator vaginal mucosa was removed and the anterior vaginal wall mucosa was preserved to a point approximately 2 or 3 centimeters proximal to the urethrovesical angle. The patients ranged in age from 54 to 90 years with an average age of 73 years (Table 1). During this period of time a number of other patients underwent vaginectomy

unrelated to vaginal prolapse; the usual indication was preinvasive cancer of the vagina. Table II lists the associated operative procedures. Over half of the patients had a uterus or retained cervical stump that was removed. One patient underwent radical removes of the cervix for early adenocarcinoma. One morbidly obese and elderly patient underwent a vaginal hysterectomy for corpus cancer. Concurrent vulvectomy for malignancy was required in two patients. Blood transfusion was administered in three (3.5%) patients. The average patient remained in the hospital for six postoperative days; five remained hospitalized for more than ten days. The causes for prolonged hospitalizations were: operative site infection, severe hydronephrosis and urinary tract infection, radical vulvectomy, myocardial infarction and congestive heart failure (Table III). There were no operative deaths.

The operative procedure is not difficult, however, certain basic principles will be outlined. The apex of the vagina on either side is identified and the mucosa incised transversely. The anterior vaginal wall mucosa incised transversely. The anterior vaginal wall mucosa is undermined in the midline to a point just distal to the urethrovesical angle. Anterior colporrhaphy is performed after identifying the ureters by palpation. Considering that these patients have often had prolonged bladder dysfunction, care is taken not to overcorrect the urethrovesical angle. The posterior vaginal wall is incised at the hymenal ring and undermined in the midline to the vaginal cuff. The mucosa is dissected laterally for identification and plication of the levator ani muscles, starting inferiorly and until the levator hiatus admits one finger.



Figure 4. Vaginal vault prolapse after suprapubic urethrovesical suspension causing inability to void except by self-catheterization.



Figure 5. Acute prolapse and urinary retention one year after radical vulvectomy.

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There are no known contraindications to the use of sucralfate.

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Duodenal ulcer is a chronic, recurrent disease. While short-term treatment with sucralfate can result in complete healing of the ulcer, a successful course of treatment with sucralfate should not be expected to alter the post-healing frequency or severity of duodenal ulceration.

Drug Interactions: Animal studies have shown that simultaneous administration of CARAFATE (sucralfate) with tetracycline, phenytoin, digoxin, or cimetidine will result in a statistically significant reduction in the bioavailability of these agents. The bioavailability of these agents may be restored simply by separating the administration of these agents from that of CARAFATE by two hours. This interaction appears to be nonsystemic in origin, presumably resulting from these agents being bound by CARAFATE in the gastrointestinal tract. The clinical significance of these animal studies is yet to be defined. However, because of the potential of CARAFATE to alter the absorption of some drugs from the gastrointestinal tract, the separate administration of CARAFATE from that of other agents should be considered when alterations in bioavailability are felt to be critical for concomitantly administered drugs.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Chronic oral toxicity studies of 24 months' duration were conducted in mice and rats at doses up to 1 gm/kg (12 times the human dose). There was no evidence of drug-related tumorigenicity. A reproduction study in rats at doses up to 38 times the human dose did not reveal any indication of fertility impairment. Mutagenicity studies were not conducted.

Pregnancy: Teratogenic effects. Pregnancy Category B. Teratogenicity studies have been performed in mice, rats, and rabbits at doses up to 50 times the human dose and have revealed no evidence of harm to the fetus due to sucralfate. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used during pregnancy only if clearly needed.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when sucralfate is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Adverse reactions to sucralfate in clinical trials were minor and only rarely led to discontinuation of the drug. In studies involving over 2,500 patients treated with sucralfate, adverse effects were reported in 121 (4.7%).

Constipation was the most frequent complaint (2.2%). Other adverse effects, reported in no more than one of every 350 patients, were diarrhea, nausea, gastric discomfort, indigestion, dry mouth, rash, pruritus, back pain, dizziness, sleepiness, and vertigo.

OVERDOSAGE

There is no experience in humans with overdosage. Acute oral toxicity studies in animals, however, using doses up to 12 gm/kg body weight, could not find a lethal dose. Risks associated with overdosage should, therefore, be minimal.

DOSAGE AND ADMINISTRATION

The recommended adult oral dosage for duodenal ulcer is 1 gm four times a day on an empty stomach.

Antacids may be prescribed as needed for relief of pain but should not be taken within one-half hour before or after sucralfate.

While healing with sucralfate may occur during the first week or two, treatment should be continued for 4 to 8 weeks unless healing has been demonstrated by x-ray or endoscopic examination.

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1. Eliakim R, Ophir M, Rachmilewitz D: *J Clin Gastroenterol* 1987;9(4):395-399.

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TABLE II. Associated Surgical Procedures

	Vaginectomy (N=85)	Sacrospinous fixation (N=40)	Abdominal colpopexy (N=23)
Vaginal hysterectomy	41	9	
Bilateral salpingo-oophorectomy	10		17
Excision cervical stump	9*		
Anteroposterior colporrhaphy	85	40	
Enterocele repair	85	40	
Posterior colporrhaphy			7
Suprapubic urethrovesical suspension		3*	14
Herniorrhaphy	3		2
Conization	3		
Transfusion	3	1	1
Vulvectomy	2		
Colon resection			2
Cystorrhaphy		1-	1
Ureteral repair			1*
Rectovaginal fistula repair		1	
Breast biopsy	1		
Cancer of endometrium - curettage	1		
Bladder tumor - fulguration	1		

* (1) Radical, * (1) Fascial sling, + Ureteral repair with prior hysterectomy, - Ligated with prior hysterectomy

The vaginal mucosa is trimmed taking care to leave sufficient mucosa anteriorly for closure to a point approximately 2 to 3 centimeters proximal to the urethrovesical angle. Additional muscle approximation, posteriorly, is continued until there is adequate support. Any additional vaginal mucosa is trimmed and the posterior wall of the shortened, infralevator vaginal mucosa approximated in the midline. A large space between peritoneal and levator ani closure remains and is packed, with or without a drain. The packing is left in place for two to three days unless there is an excessive febrile response. A suprapubic catheter is placed into the bladder if there has been prolonged preoperative bladder dysfunction. All patients were given prophylactic antibiotics which were continued until the pack was removed.

Sacrospinous Fixation

Forty patients underwent a transvaginal sacrospinous fixation of the vaginal vault. The age of these patients varied from 33 to 75 years with an average of 62 years (Table I). Table II lists associated surgical procedures. All patients underwent an anterior posterior colporrhaphy with enterocele repair. If there was a uterus, it was removed. Bilateral fixation was performed on 14 patients who demonstrated a very spacious and redundant vagina. Two suprapubic urethrovesical suspensions and one fascial sling were necessary to support the bladder. The bladder was entered in one patient who had undergone a ureteral repair at the time of a prior hysterectomy. A 4th degree laceration was repaired concurrently in one younger patient who also underwent vaginal hysterectomy, suprapubic urethrovesical suspension and transfusion.

The operative technique was essentially that reported by Nichols and Richter. Anterior colporrhaphy and enterocele repair were performed. The posterior vaginal wall was incised to the cuff. The right ischial spine was palpated and the rectal pillar penetrated for visualization of the sacrospinous ligament which was facilitated by use of Breisky-Navratil retractors. Care was taken to retract the cardinal ligament, rectum and vagina. A #1 absorbable suture was placed through the sacral end of the ligament with a Deschamps ligature carrier and secured to the vaginal apex on that side with a "pulley stitch." If necessary, a similar stitch was placed in the left ligament. The upper portion of the posterior colporrhaphy was completed and the vaginal mucosa approximated in the midline with the exception of a small defect at the apex. The sacrospinous ligament sutures were then tied to elevate the vaginal cuff and the posterior colporrhaphy was completed.

There were no major postoperative complications. The number of postoperative days varied from three to ten days with an average of six days. No patient stayed longer than ten days, postoperatively. One patient was readmitted to the hospital with antibiotic associated diarrhea.

This operation serves well to support the vaginal cuff. However, support of the anterior vaginal wall in those patients whose primary preoperative vaginal relaxation was in that area had caused some concern. Although only one patient has undergone secondary surgery for correction of recurrent enterocele and cystocele by transabdominal sacral fixation, there are others who demonstrate recurrent relaxation of the anterior wall. The 34-year-old patient who underwent a concurrent suprapubic urethrovesical suspen-

sion is somewhat heavy, works as a nurse and cares for two children, all of which are risk factors for recurrent herniation. A primary fascial sling suprapubic urethrovesical suspension would have been superior to the standard supropubic procedure.

Transabdominal Sacrocolpopexy

Twenty-three patients underwent abdominal sacral colpopexy. The age of these patients varied from 43 to 74 years with an average of 57.5 years (Table I). Concurrent operative procedures for these patients is listed in Table II. If ovaries had been retained, they were removed. Unless there was excellent support of the bladder neck, a urethrovesical suspension was performed. If present, a rectocele was repaired. Interestingly, two patients underwent a concurrent colon resection. One was found to have a low rectal tumor palpable on rectal examination which was removed by abdominoperineal resection. Another tumor was identified as an ill-defined left adnexal mass and a concurrent low anterior resection was performed. A cystotomy occurred during suprapubic urethrovesical suspension in a patient who had undergone ureteral reimplantation at the time of prior hysterectomy. Another patient was found to have a dilated left ureter that had been secured with a silk suture at the time of prior hysterectomy; the consulting urologist elected to perform a ureteroneocystostomy.

A strip of Marlex mesh approximately 2 inches in width was used as a suspending material in most patients. Rectus fascia was used in the patient undergoing ureteral repair and the other undergoing a colon resection. A piece of Dacron arterial graft material was used in one patient but probably provided no advantage. In the patient undergoing abdominoperineal resection, the apex of the vagina was sutured to the sacrum with Prolene sutures.

TABLE III. Causes for Greater than 10 Postoperative Days

Vaginectomy	
11 days	Cuff infection
12	Hydronephrosis, infection
14	Radical vulvectomy
17	Myocardial infarction
21	Congestive heart failure
Sacrospinous Fixation	
None	
Abdominal colpopexy	
15 days	Pulmonary embolus
19	Abdominoperineal resection

Elevation of the vaginal apex with an obturator facilitated identification of the vaginal vault and any dissection of the bladder that was necessary. A bilateral salpingo-oophorectomy was performed routinely to remove residual ovaries. A deep cul-de-sac, invariably present in these patients, was closed with a Moschcowitz or Halban culdoplasty using silk suture. The sacral promonotory was visualized to the right of the colon, which had been retracted to the left. The ureter was identified and retracted laterally. The presacral areolar tissue was cleaned from the presacral ligament for identification of veins. Three sutures of #00 silk were placed through the presacral ligament. A strip of Marlex mesh was doubled such that it was about 2 inches in width and one end was sutured to the sacral promonotory. The mesh was placed loosely in the concavity of the pelvis and sutured with silk to the previously identified vaginal apex without penetrating the vaginal mucosa. The medial edge of the strip was sutured to the colon to prevent internal herniation and no attempt was made to cover the mesh with peritoneum. The anterior peritoneum was closed and a suprapubic urethrovesical suspension performed when indicated. After completion of the abdominal operation, a posterior colporrhaphy was performed if indicated.

All patients were given prophylactic antibiotics. The range of postoperative days was 4 to 19 with an average of 7 days. Two patients were hospitalized for more than 10 days postoperatively (Table III). One patient sustained a pulmonary embolus which required 15 days hospitalization and the patient who underwent an abdominoperineal resection remained for 19 days. There were no postoperative deaths and no patients have required a secondary repair.

Discussion

An approximately nine-year experience with surgical correction of total procidentia or vaginal vault prolapse has been reviewed. The purpose of this report is to review criteria for selection of an operative approach and to evaluate operative complications and short term results. The long term results of these operations cannot be well evaluated, but certain conclusions can be suggested.

Anteroposterior colporrhaphy and vaginectomy is the treatment of choice for those patients who do not desire continued vaginal function because of age or physical disability. The procedure is well tolerated by the medically inform, and in fact significantly enhances the quality of life for those patients who are rendered less physically active or are undergoing progressive urinary tract deterioration and dysfunction. It is important that the vesical neck not be elevated too greatly and that vaginal mucosa be retained to a point 2 or 3 centimeters proximal to the urethrovesical angle to maintain its dynamic function. A suprapubic catheter is helpful in those patients who have experienced prolonged bladder dysfunction from incomplete emptying and recurrent lower urinary tract infections. A month or two may be necessary to rehabilitate bladder function. The greatest

advantage of the operation is that it provides a permanent repair of the vaginal hernia.

Transvaginal sacrospinous fixation of the vaginal vault is an excellent operation for retention of vaginal function. The author is utilizing the operation much more frequently in the young patient who is undergoing surgery for significant uterine and vaginal prolapse. This procedure serves the purpose of repositioning the vagina to obviate the explosive force of intraabdominal pressure in these young and vigorous patients. The primary deficiency in the operation is long term adequate support of the anterior vaginal wall. Perhaps more liberal use of a concurrent fascial sling suprapubic urethrovesical suspension would be beneficial.

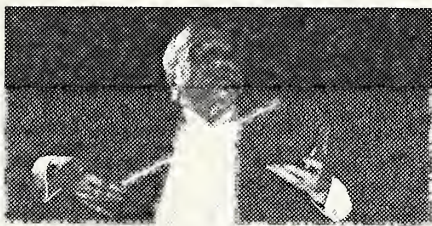
Transabdominal sacral colpopexy requires an abdominal operation but has proved to be quite effective for correction of the deep cul-de-sac and for repositioning of the vagina. It is important to suspend the vagina loosely such that it is repositioned but that pliability is maintained. Whenever there is a question of urethrovesical angle support, a suprapubic suspension should be performed to prevent postoperative stress incontinence from excessive straightening of the anterior vaginal wall. Posterior colporrhaphy repairs any defect in the posterior vaginal wall. The remaining question about this operation is whether or not a synthetic material, such as Marlex mesh, should be used to support the vaginal cuff in an aging group of patients prone to diverticulitis. This has not been a problem in this series, however, when in doubt it would probably be wiser to use a strip of fascia from the abdominal wall.

During the eight months since completion of this study an additional sixteen operations have been performed. The

procedures were as follows: vaginectomy, five; sacrospinous fixation, four; and abdominal colpopexy, seven. A fascial sling suprapubic urethrovesical suspension was performed on all patients undergoing sacrospinous vaginal vault fixation. Six of the seven patients undergoing abdominal colpopexy underwent an abdominal urethrovesical suspension, one of which was a fascial sling.

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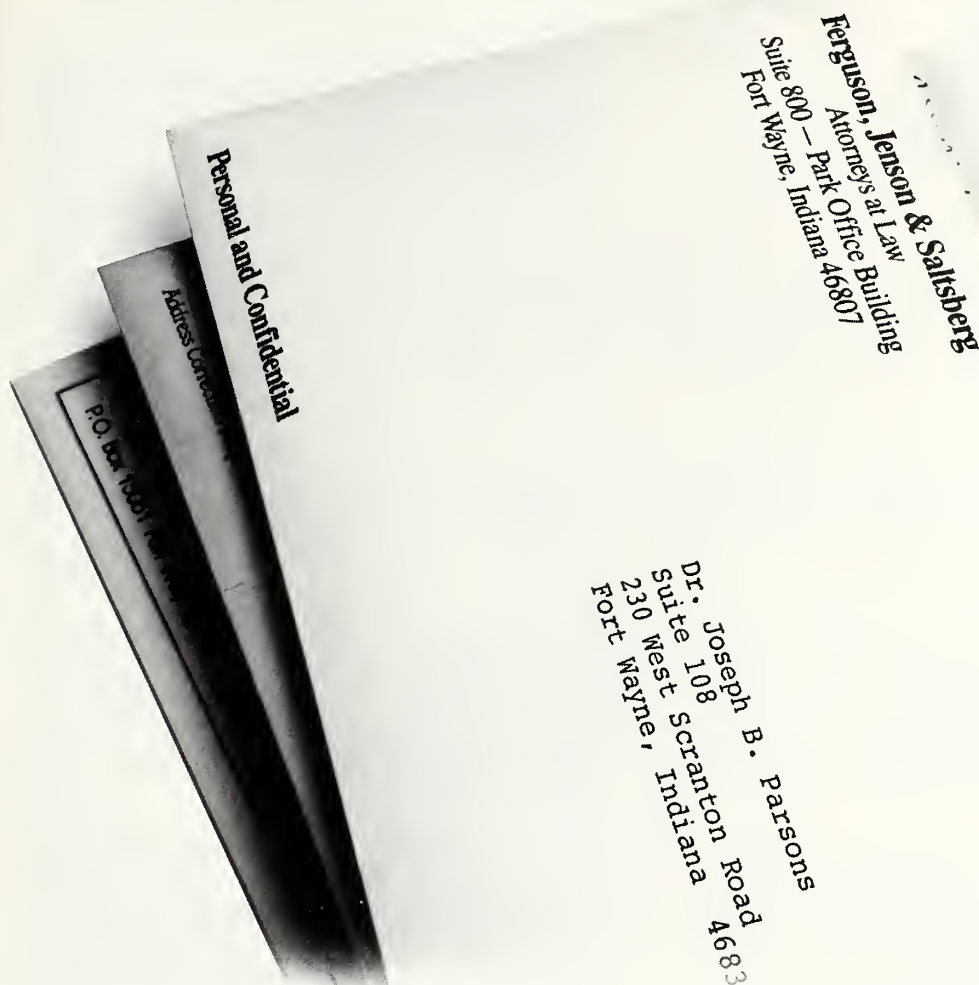
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ELECTROCARDIOGRAM of the MONTH

John Smith, M.D.
John W. Watson, M.D.
UAMS Division of Cardiology
Little Rock, Arkansas

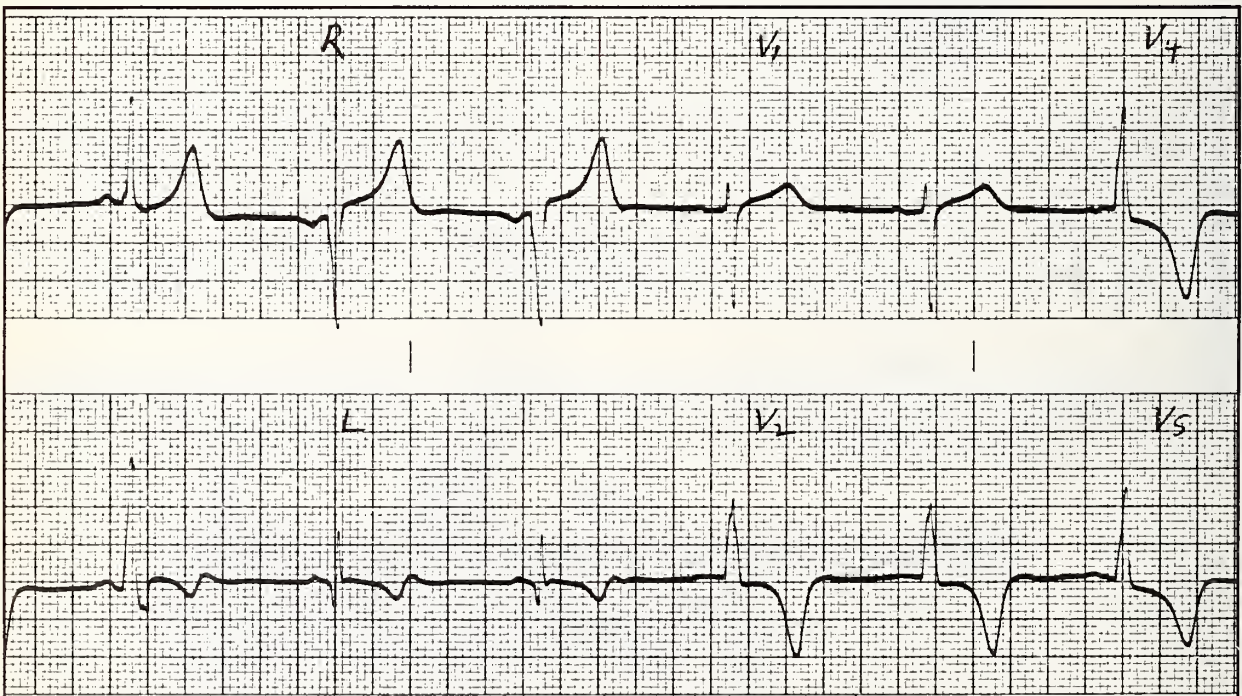
CLINICAL HISTORY:

W. R. is a 45-year-old man initially presenting to the emergency room because of headache. While under observation, he lost consciousness. The blood pressure was 200/140. Papilledema was present. The baseline electrocardiogram obtained in the emergency area is shown. What do you think?

DISCUSSION:

Sinus bradycardia at a rate of 57 per minute is present. The intrinsicoid is delayed in V_6 . The T-waves are deeply inverted in a generalized manner. Voltage criteria for LVH by either the Estes or Scott scoring system is met. By either system, LVH is present. However, the presentation makes one consider a CNS event such as subarachnoid hemorrhage and similar changes on the electrocardiogram to those seen here have indeed been seen in such CNS events. Myocardial infarction may yield similar electrocardiographic aberrations.

The editor wishes to thank Dr. Smith of Conway for his assistance with this month's ECG.



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Yohimbine exerts a stimulating action on the mood and may increase anxiety. Such actions have not been adequately studied or related to dosage although they appear to require high doses of the drug. Yohimbine has a mild anti-diuretic action, probably via stimulation of hypothalamic centers and release of posterior pituitary hormone.

Reportedly, Yohimbine exerts no significant influence on cardiac stimulation and other effects mediated by B-adrenergic receptors, its effect on blood pressure, if any, would be to lower it; however no adequate studies are at hand to quantitate this effect in terms of Yohimbine dosage.

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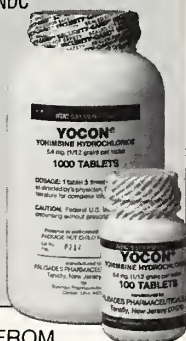
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

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Tennis Elbow: Its Clinical Course, Etiology and Treatment

*Margaret Wood, M.S. and Norris C. Knight, M.D.**

Introduction

The symptoms of tennis elbow were originally described in a discussion of lawn-tennis by Major in 1883.¹ Since that time, it has come to be recognized as a condition that is common not only among tennis players but also in the general population. It is most often characterized by pain in the region of the humerus with radiation down the extensor surface of the forearm. It is brought on by activities that involve excessive pronation and supination of the forearm with an extended wrist, particularly in an improperly conditioned arm. The name "tennis elbow" is somewhat misleading since 95% of all cases occur in non-athletes who carry out repetitive, one-sided movements in their work (e.g., carpenters, pipe-fitters, needleworkers, etc.); among tennis players over age 30, however, the incidence has been reported to be as high as 50%.² Incidence is about equal in men and women except among regular tennis players where it is more common in the male. Peak incidence is in the age group 40 to 50. It is rarely seen in black persons - one study of 1,000 patients in an area of equal racial distribution, all were Caucasian.

Clinical Presentation and Diagnosis

The clinical manifestations of tennis elbow most often involve localized tenderness over the lateral epicondyle with irritation and pain in the extensor carpi radialis muscles. Weakness and pain also occur along the wrist and finger extensors and the supinator muscles. The onset of symptoms is usually gradual. A persistent ache appears over the lateral epicondyle and radiates down the extensor surface of the forearm, and is intensified by grasping or twisting motions. Grasping requires setting of the extensor carpi radialis brevis and longus, and supination of the forearm requires active contraction of the supinator longus and brevis. These muscles originate from the lateral epicondyle and epicondylar ridge and from the anterior capsule. Localized tenderness is not limited to the lateral epicondyle but may also exist over the

epicondylar ridge, over the radio-humeral interval, and over the lower anterior edge of the capitellum. In addition, the patient may complain of weakness limiting his ability to grasp objects, particularly with the forearm in pronation. One diagnostic test is considered positive when pain can be reproduced by extending the elbow, pronating the forearm, and flexing the wrist. Pain may also be triggered by straightening the flexed fingers against resistance, by dorsiflexion of the wrist, and by supination of the forearm against resistance.³ In about 14% of the cases, tennis elbow involves the medial, rather than the lateral, epicondyle.⁴ In these patients, tenderness is localized over the medial epicondyle and may extend distally along the pronator teres and flexor carpi radialis.

Routine AP and lateral x-ray studies are usually of little help in the diagnosis, but calcification in the soft tissues about the involved epicondyle will be present in 22-25% of cases.⁵ This is best disclosed by obtaining "gun-sight" oblique views of the epicondyle which often show irregular-

The name "tennis elbow" is misleading since 95% of all cases occur in non-athletes who carry out repetitive, one-sided movements in their work .

ity or punctate calcification. Prognosis is not significantly affected by radiographic findings.

Etiology

Although the etiology of tennis elbow is unclear, the primary factor is most likely a mechanical predisposition of the elbow associated with a force overload. Additional factors include limited flexibility and lack of power in the forearm extensors and physiological alterations associated with aging.⁶ The actual cause of the symptomatology is less

* Collom & Carney Clinic, P. O. Box 1409, Texarkana, AR 75504.

Surgical treatment is indicated only when conservative treatment is unsuccessful. It provides lasting relief of symptoms in over 90% of patients.

clear. Many concepts have been presented including chronic irritation at the radio-humeral joint, inflammation of the bursa underneath the conjoint tendon, myositis of the extensors secondary to periosteal avulsion, and radial nerve entrapment. The most widely held theory is that there are tiny tears, usually in the origin of the extensor carpi radialis brevis with formation of subsequent fibrosis and granulation tissue as a consequence of repetitive trauma.⁵ A number of authors have proposed that the microscopic tears result in mucinoid degeneration of the tendinous origin and reactive granulation tissue in that space, and that chronic stress causes eventual failure of a portion of the tendon. The granulation tissue produced contains large numbers of free nerve endings, and these may be largely responsible for the pain.

Treatment

Conservative treatment of tennis elbow includes use of anti-inflammatory agents to relieve acute inflammation and elimination of activities that are painful. For extensor symptoms, avoidance of grasping in pronation and substituting lifting by supination is often effective. A program of strengthening and flexibility exercises is then introduced - this includes exercises for the entire involved extremity including the shoulder, elbow, wrist, and hand. Progressive repetitions on a daily basis are increased gradually but kept below a painful level. In patients with occupational activities that require overuse, alterations should be sought that will minimize repetitive powerful action with the forearm in full pronated position. Tennis players may need to alter their technique. In the non-professional this usually means improving backhand stroke and avoidance of ball impact without proper forward body weight transference. It may also require equipment change such as a lighter racquet, reducing racquet string tension, and enlarging the grip. The use of injectable steroids, due to their possible contribution to tendon rupture, is usually reserved for those cases where the above measures have failed and probably should not exceed three injections over a period of one year.⁵

Surgical treatment is indicated only when conservative treatment is unsuccessful. It provides immediate and lasting relief of symptoms in over 90% of patients. A popular technique recommended by Nirschl⁷ for tennis elbow involves a thorough inspection of the undersurface of the extensor carpi radialis brevis and the extensor digitorum communis origin to detect any tears in this area. These muscles are lifted up from their origin and all granulation or fibrous tissue or areas of rupture are excised. Decortication of a small area of the lateral epicondyle is then performed to promote tendon reattachment. The soft tissues are then repaired, with the extensor brevis often being reattached to

the surrounding tissues. A posterior splint is then applied with the arm flexed at 90 degrees and the forearm in neutral rotation. At 10 to 14 days the splint is removed and range of motion exercises are begun. A more extensive surgical procedure recommended by Boyd and McLeod⁸ involves release of the origin of the extensor muscles, removal of the bursa, and excision of the proximal part of the annular ligament and of the synovial fringe between the capitellum and the radial head. This procedure tries to eliminate all potential pathology until the exact etiology of tennis elbow is identified.

Postoperative strengthening exercises for the wrist and fingers are begun with isometric exercises, progressing to resistive exercises as strength improves. Stretching exercises are also initiated to prevent contraction. After the patient's strength has returned and there is no local tenderness - usually around the sixth post-op week - a return to sports or occupation is gradually allowed. An elbow counterforce brace is often applied for additional support and comfort.

Conclusion

The manifestations of tennis elbow may range from a brief, acute episode to a chronic process that persists for many years. Progression to the chronic state often depends on the patient's compliance with a treatment and rehabilitation regimen and on his ability to limit exacerbating physical activities. This, in turn, may be affected by the degree of pain experienced. The majority of cases can be diagnosed and treated in a conservative manner as discussed previously, and, in those who fail these measures, surgery has proven highly successful for symptomatic relief. Preventative measures such as strengthening and stretching exercises, proper use of equipment, and possible equipment modification should be stressed, particularly in those whose sports or occupations put them at risk for developing tennis elbow.

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Malignant Melanoma Infiltrating the Reticular Dermis at Level IV

*Jere D. Guin, M.D., Anthony P. Bucolo, Jr., M.D., William E. Atkinson, M.D., Jerry L. Prather, M.D., Harold D. Langston, M.D., and Harriet Farley, M.S.W.**

Case History

A 60-year-old female presented to the Second Opinion Panel after a malignant melanoma, Clark's level 4,¹ was excised from her right wrist (12-3-85). She appeared with multiple new nodules and pain from a necrotic lesion in the right hip area. The patient had had cancer of the thyroid which was surgically treated in 1976, followed by Synthroid replacement.

In May, 1987, while undergoing routine follow-up for the malignant melanoma, a mass was noted in the right axilla. This was surgically excised and found to be a malignant melanoma. A left breast nodule was removed 12-18-87, which also proved to be malignant melanoma.

At last examination (2-15-88), the patient was feeling reasonably well, but thought she may have developed some new nodules. On examination she was not icteric. Her lungs were clear and her heart was regular. The liver and spleen were not enlarged. Progressive disease was indicated by multiple other nodules. The treating physician noted that he would change to either Interferon or Dacarbazine (DTIC), if progressive disease continued.

Pathology Review

William E. Atkinson, M.D.

A review of the histol-pathology revealed a malignant melanoma, nodular, infiltrating the reticular dermis at level IV at the right wrist with proven metastases to lymph nodes in the right axilla and left breast.

Diagnostic X-ray Evaluation

Jerry L. Prather, M.D.

In 1985, bone and liver scans were normal as were her chest x-ray and liver function studies. She had also had an I-131 whole body scan that revealed some residual uptake in the neck after a near total thyroidectomy and had I-131

ablation of that remaining thyroid tissue. Following the excision of the mass noted in her right axilla a CAT scan of the head and chest and a bone scan were negative for any evidence of disease.

Dermatology Opinion

Jere D. Guin, M.D.

A brief examination of the patient confirmed the progression of the disease and the necrotic lesion at the right hip.

Medical Oncology Opinion

Anthony P. Bucolo, M.D.

Dacardazine (DTIC) is the agent considered to be the most active against melanoma,² producing an average response rate of 20% that lasts for four to five months. Until now, no investigational agent has been demonstrated to be superior to DTIC.

The use of Interferon as an option appears appropriate.³

Radiation Therapy Opinion

Harold D. Langston, M.D.

Radiation therapy has been used to compliment surgery in the management of melanoma where limiting margin of resection were required. The effectiveness of high dose fractionations may exist, but has not been formally established.⁴

Consensus

The panel was in agreement with the previous histopathologic diagnosis as well as the surgical treatment and proposed chemotherapeutic regimen. In addition the panel members felt that surgical removal of the painful hip lesion, which at this time is necrotic, could be accomplished. In view of the recent history, this would certainly afford the patient some pain relief.

Treatment with Interferon or DTIC was discussed in regard to the unavailability of such treatment at this time in Little Rock, Arkansas. Experimental protocols were briefly discussed. It was emphasized to the patient that the panel

* St. Vincent Cancer Center, St. Vincent Infirmary Medical Center, Two St. Vincent Circle, Little Rock, AR 72205.

could not recommend such treatment and that protocols with Interleukin-2 and LAK cells were available in only a few centers in the United States. In addition there were qualification standards to be met before patients could be accepted into these programs. It was explained that these experimental protocols were available when all approved treatment regimens had failed and in an estimated 10-20%, some response might be expected.^{5,6}

Social Work Assistance

Harriet Farley, M.S.W.

After the panel discussion the patient and her husband met with the Social Worker. The Social Worker provided assistance in adjusting the patient's perception and understanding of her disease to a more realistic one in dealing with the emotional impact of the progression of the disease.

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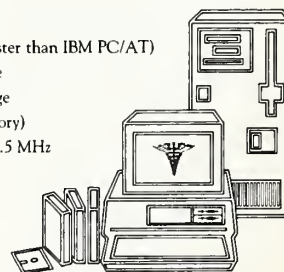
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FROM OTHER YEARS

Three Out of Four: The Hayes Brothers

Harry Hayes, Jr., M.D.*

The title of this paper refers to the fact that three out of the four Hayes brothers were graduated from the University of Arkansas School of Medicine. The four brothers were pretty close to each other, not only in age, but in a family relationship. The oldest, Bill, was born in 1902. Then came Harry (1904), Donald (1908) and the youngest, Candler, born in 1913. Part of the reason for the close sibling ties was the frequent moves made by the family during their early years; this made it difficult to form lasting relationships among their school chums and neighbors.

Their mother, Libby Lucille Brownlee, was raised near Burnet, Texas and the cemetery is still full of family members. She died after delivering Candler, presumably of puerperal sepsis.

Their father, William Graham Hayes, was what was then called, "a traveling man." This term not only described his career but his life style as well. While never hungry, they were never more than a few dollars ahead.

We have only a sketchy account of the travels of W. G. Hayes and his growing boys; possibly the boys themselves could not have accurately recounted the various moves. At any rate, sometime following the death of his wife, the family was in Prescott, Arkansas. They lived there long enough that the boys considered this their "home town." W. G. developed a romantic interest in a young lady there, Lela Andrews. Lela was from a prominent family; her father was in the hardware business and served several terms as mayor. We can only speculate what talk must have gone around town when Lela agreed to marry this widower with four lively young boys; it was surely a tribute to his persuasive powers.

It was during the first world war and shortly thereafter; in rural America there were some Model T Fords, more mud than paved streets, the daily train stop was a big event and the silent movies were the chief form of entertainment (along with the pool hall).

There was one episode which the boys all vouched for: it seems they irritated a farmer who ran the boys off his

property; they retaliated by sneaking out that night, "borrowing" a large can of paint (which happened to be a glossy green) and painting all his livestock! For some unknown reason, the boys were never accused of this act.

Whenever the boys, or any members of their families, visited Prescott, they always received a warm welcome; this is still true today. The four boys attended public school in Prescott; Lela was the one that kept up their interest in their school work.

Each boy was developing his own distinctive personality. Harry, because of his small size, had to rely more on brain than on brawn. Donald had the most engaging personality and was the most popular. Candler had the best sense of humor and this continued into later years. None of the boys were outstanding: mediocre grades and very average athletic abilities, except they all did run for their track teams. Bill, finishing high school first, took off for North Carolina and very little was ever heard from him. Harry, stimulated by his stepmother, was able to get into Hendrix College in Conway where he spent two years.

At that time, admission to medical school was relatively easy (compared to today). It was usual for most of the students to go to school and also have full-time jobs. By doing this, you could pay tuition, fees, books, room and board and have a little left over. Harry had such a job at the old King's Drug Store. Someone once mentioned to me that Harry took five years to get through medical school; that, too, was not unusual. He was graduated from the University of Arkansas School of Medicine in 1929; Donald, who attended college at Henderson (Arkadelphia) and St. John's (Little Rock) finished in 1931. Candler was still in public school during these years and we will bring him back into the story later.

Needless to say, the years 1929-1931 were financially tough for almost everyone. Harry did an internship at St. Vincent Infirmary; this was almost *de rigueur* for any young physician contemplating a private practice in Arkansas at that time. Donald followed along exactly the same lines.

At about this time, Harry met a very attractive young lady named Violet Jean Wells. They were married in Little Rock in 1930. Her father had owned a large farm near

* Dr. Hayes is engaged in the private practice of plastic surgery at #1 St. Vincent Circle, Suite 310, Little Rock, AR 72205.

Gould, Arkansas which he lost in the Depression. Her only brother, John Wells, distinguished himself in later years as a political commentator and publisher in Little Rock. He came in during the Carl Bailey administration; during the Faubus era he was very critical and, apparently, effected some changes in the state government practices of the time.

After Harry and Violet were married, she continued to work as an operator for Southwestern Bell. Harry looked far and wide for a job and, somehow, miraculously, landed a job as jail physician in Mansfield, Ohio. This, at least, meant a decent house, a car and a few luxuries. Harry, Jr., their first son, was born in Little Rock in 1931; Richard, their second son, was born in Mansfield.

In those days, practically all travel was by rail, and Violet recounted frequently the discomforts of an overnight train trip sitting up with children. Not only were the infant children kept in baskets, but she must have been a basket case herself when it finally ended.

In Mansfield, the couple were able to save enough money so that they could return to Little Rock where Harry could start a practice. When they did so, he opened a tiny office in the Donaghey Building at 7th and Main; he was given three months free rent as an inducement to sign a lease. This was the prestige location for a physician at the time. He was accepted on the staffs of both St. Vincent Infirmary and the Arkansas Baptist Hospital.

The two institutions were located near 12th and Marshall Streets then and were separated by an open field, which could be muddy or dusty, depending on the season. The physician at that time had his dignity, and not one was ever known to walk that one block distance between the two buildings! The medical staff parking lot at St. Vincent was up a little incline; there could not have been room for more than 15 cars at one time, but never, in all the years that I can recall, was the lot completely full. (After the second war, they did take in some additional space across the street because of the influx of returning physicians.) These were the days when Sr. Hildegard used to move down the dim, even dark, corridors at St. Vincent, and if your eyes were not sharp she would give you a start.

At the time, Dr. Merlin Kilbury was the pathologist. He did the autopsies, blood chemistries, blood smears and blood transfusions. He even typed his own reports until they got him a part-time secretary. He would distribute the reports to the nursing stations on the way to his car at the end of the work day. Whenever he did a blood transfusion, it was such an event that several physicians from outlying areas were usually there to observe the technique. The space for the laboratory took up no more than about 30 by 30 feet and there was always standing room.

All the nurses wore stiff, starched uniforms; they always stood up respectfully when a physician entered the area and they handed him the patient's chart. These might be called the "entrepreneurial" days: health insurance claims were just 5-10% of billings, and except for the railroad and the military, there were few other third party payors.

Candler had by now finished the prescribed two-year pre-med course at what was then Little Rock Junior College. He entered medical school in 1934. During most of these years he lived with Harry and his growing family; in return he did odd jobs and was allowed relative peace and quiet in the dining room at night for study. There were now four chil-



John Harry, Hayes, M.D., 1904-1963

dren in the house and beds were a little crowded! After finishing with what was the best grade point of the brothers, Candler interned in Florida. In the brief period before December 7, 1941, Candler returned to join the brothers. Donald went off and took brief courses in gastroenterology and abdominal surgery; he also enjoyed orthopedics. Harry was becoming the workhorse, a trait that was to endure the rest of his life.

Donald had established himself firmly on the North Little Rock scene. He was the most outgoing and personable of the boys. He met a vivacious blond medical technician at the hospital. She was Lucille Jones, the sister of a physician, Dr. H. Fay H. Jones, who was to become the most prominent urologist in the State. The couple had two children, a girl and then a boy, and moved into a large house on the Ark-Mo Highway (now JFK Boulevard). Lucille lives there to this day. Donald got involved in several local clubs and served several terms as the "grand exhausted rooster" at the North Little Rock Elks Club.

December 7th changed everything. Donald had enough experience in abdominal surgery and orthopedics to make him a prime candidate for the military. He volunteered and was inducted early. He was at Waco, Texas, briefly (which was then just a wide stretch of dusty road). He spent several years in the E.T.O. There were several good stories from this time. One involved his jeep, driver, .45 caliber pistol and some inlaid silver German shotguns. Candler was taken a little later. His military career was less



James Donald Hayes, M.D., 1908-1969



Candler Kilgo Hayes, M.D., 1913-1965

distinguished: he spent the war at a base on the Gulf of Mexico inspecting latrines and mess halls.

Harry also volunteered but there were several considerations. Two physician brothers were already serving, Harry had the most children, and somebody had to stay behind and care for the civilian hospital. At any rate, Dr. Bradsher in Fort Smith, who exercised

authoritarian control over the supply and demand of Arkansas physicians for the military, decided Harry should stay behind.

As one of just a few doctors in Little Rock, he developed an enormous practice almost overnight; this was to last for the duration. His patient list never had fewer than 40 names and sometimes as many as 60. There were "homefront" stories as well as "war" stories. Harry lived one block from St. Mary's Academy; he treated all the nuns and students at no charge, but his children all got free passes to swim in the old pool underneath the gym during the summers. There were also lots of cookies and cakes at Christmas.

Another story involving Harry had a sad ending. There was a very personable restaurateur named "Sammy" who ran a very popular place at the foot of Main Street and Asher. Harry examined Sammy for the army at least three times and turned him down for various medical reasons; however, Sammy was very persistent and finally he was passed. He was posted overseas and was killed a few months later. The whole town went into mourning. Harry felt very badly about this for a long time.

Harry was working day and night. It was up to Violet to manage the four children (there was later to be another boy); if she had a fault it was that she did everything herself.

After the war, Donald and Candler returned, and it was "Drs. Hayes, Hayes, and Hayes" for a brief time. During the war, Candler met a cute little Army nurse, Ann Cherup, from Pennsylvania. She had a brother who was a surgeon in the Pittsburgh area. It was a typical wartime "whirlwind" romance which lasted more than 25 years. The couple tried to make a "go" of it in Little Rock, but the office space was cramped and so was their little house. Candler also tried practicing in England, Arkansas, and witnessed almost total crop failure every year. The couple decided to move back to Florida, settling first in the Stark/Madison community and then in Homestead (just south of Miami). Candler had a good general practice and did some minor surgery.

Soon after the war, Harry and Violet were able to move to a much larger and more comfortable home in the upper

Heights, where they had lots of friends and patients. They joined several country clubs and became active on the social scene. On the medical side, Harry was especially proud of his goiter surgery; during his career he performed more than 2,000 thyroidectomies with practically zero mortality.

In the fifties, Donald suffered a heart attack with myocardial damage and he retired from medical practice. He continued a very active lifestyle, engaged in several businesses and continued to enjoy hunting, fishing, and most other outdoor activities.

One of the few recreational activities enjoyed by Harry were the horse races at Oaklawn. One cold night in March, 1963, Harry, Violet and two other couples were driving home (after the usual steak dinner at Coy's) when Harry developed some chest pain. They stopped by the hospital in Benton and Harry was kept overnight. The next day he was transferred to Little Rock, where, about two weeks later, he suffered another massive, fatal heart attack. He is survived today by a son, Dr. Harry Hayes, Jr., a recently retired plastic surgeon who is pursuing a writing career in the history of medicine; a daughter, Sarah Jane, married to Dr. Mose Smith, an eminent gynecologist; and Tommy Hayes, an accountant in Coral Gables, Florida.

Candler was working hard in Homestead when he developed vague abdominal pain and was hospitalized. He died in 1965 of a fulminating pancreatitis. He is survived by his widow, Anne, who just recently retired as a nursing supervisor in a Miami hospital; two sons, Candler, Jr., and Mark; two daughters, Cheryl and Betsy. Betsy is a R.N.; all are living and working in the Miami/Homestead area.

Donald continued a very active life until 1969 when he, too, had a severe heart attack. At that time the Baptist Hospital was undergoing some rapid changes and Donald was admitted to a unique open area with highly skilled nurses; this was to evolve into the present-day coronary care unit. He is survived by his widow, Lucille, and two children, a daughter, Libby, living in Dallas; and a son, Donald, Jr., living in North Little Rock.

The brothers lived full lives during exciting times. As children they relied on each other for companionship, just as they did in helping each other through medical school and later in establishing their practices. Their personalities were very different, which is not surprising. Harry led the way into medicine, but both Donald and Candler shared his enthusiasm for medical practice. Their era spanned the days of the "horse and buggy doctor" to the introduction of high-tech medicine in the sixties. They all made significant contributions, each in his own unique way. I know they would be pleased with this brief account of those times.

Author's Note: The author greatly acknowledges the assistance of Mrs. Lucille Hayes of North Little Rock, Arkansas, and Mrs. Ann Hayes of Homestead, Florida who supplied many of the details in the preparation of this report. The genealogical information was obtained from the files in the Amelia Courthouse, Amelia County, Virginia and in the Thomas County courthouse, Thomasville, Georgia. Kathy Wirzfeld was very helpful in the preparation of the manuscript.

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3. Pharmacokinetic studies in patients with hepatorenal syndrome have not been done. Part of the dose of nizatidine is metabolized in the liver. In patients with normal renal function and uncomplicated hepatic dysfunction, the disposition of nizatidine is similar to that in normal subjects.

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Drug Interactions — No interactions have been observed between Axid and theophylline, chlorazepoxide, lorazepam, lidocaine, phenytoin, and warfarin. Axid does not inhibit the cytochrome P-450-linked drug-metabolizing enzyme system; therefore, drug interactions mediated by inhibition of hepatic metabolism are not expected to occur. In patients given very high doses (3,300 mg) of aspirin daily, increases in serum salicylate levels were seen when nizatidine, 150 mg b.i.d., was administered concurrently.

Carcinogenesis, Mutagenesis, Impairment of Fertility — A two-year oral carcinogenicity study in rats with doses as high as 500 mg/kg/day (about 80 times the recommended daily therapeutic dose) showed no evidence of a carcinogenic effect. There was a dose-related increase in the density of enterocristatin-like (ECL) cells in the gastric oxyntic mucosa. In a two-year study in mice, there was no evidence of a carcinogenic effect in male mice, although hyperplastic nodules of the liver were increased in the high-dose males as compared with placebo. Female mice given the high dose of Axid (2,000 mg/kg/day, about 330 times the human dose) showed marginally statistically significant increases in hepatic carcinoma and hepatic nodular hyperplasia with no numerical increase seen in any of the other dose groups. The rate of hepatic carcinoma in the high-dose animals was within the historical control limits seen for the strain of mice used. The female mice were given a dose larger than the maximum tolerated dose, as indicated by excessive (50%) weight decrement as compared with concurrent controls and evidence of mild liver injury (transaminase elevations). The occurrence of a marginal finding at high dose only in animals given an excessive and somewhat hepatotoxic dose, with no evidence of a carcinogenic effect in rats, male mice, and female mice (given up to 360 mg/kg/day, about 60 times the human dose), and a negative mutagenicity battery are not considered evidence of a carcinogenic potential for Axid.

Axid was not mutagenic in a battery of tests performed to evaluate its potential genetic toxicity, including bacterial mutation tests, unscheduled DNA synthesis, sister chromatid exchange, mouse lymphoma assay, chromosome aberration tests, and a micronucleus test.

In a two-generation, perinatal and postnatal fertility study in rats, doses of nizatidine up to 650 mg/kg/day produced no adverse effects on the reproductive performance of parental animals or their progeny.

Pregnancy — Teratogenic Effects — Pregnancy Category C — Oral reproduction studies in rats at doses up to 300 times the human dose and in Dutch Belted rabbits at doses up to 55 times the human dose revealed no evidence of impaired fertility or teratogenic effect, but, at a dose equivalent to 300 times the human dose, treated rabbits had abortions, decreased number of live fetuses, and depressed fetal weights. On intravenous administration to pregnant New Zealand White rabbits, nizatidine at 20 mg/kg produced cardiac enlargement, coarctation of the aortic arch, and cutaneous edema in one fetus and at 50 mg/kg it produced ventricular anomaly, distended abdomen, spina bifida, hydrocephaly, and enlarged heart in one fetus. There are, however, no adequate and well-controlled studies in pregnant women. It is also not known whether nizatidine can cause fetal harm when administered to a pregnant woman or can affect reproduction capacity. Nizatidine should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers — Studies conducted in lactating women have shown that <0.1% of the administered oral dose of nizatidine is secreted in human milk in proportion to plasma concentrations. Caution should be exercised when administering nizatidine to a nursing mother.

Pediatric Use — Safety and effectiveness in children have not been established. **Use in Elderly Patients** — Ulcer healing rates in elderly patients are similar to those in younger age groups. The incidence rates of adverse events and laboratory test abnormalities are also similar to those seen in other age groups. Age alone may not be an important factor in the disposition of nizatidine. Elderly patients may have reduced renal function.

Adverse Reactions: Clinical trials of nizatidine included almost 5,000 patients given nizatidine in studies of varying durations. Domestic placebo-controlled trials included over 1,500 patients given nizatidine and over 1,300 given placebo. Among reported adverse events in the domestic placebo-controlled trials, were headache (1% vs 0.2%), urticaria (0.5% vs < 0.01%), and somnolence (2.4% vs 1.3%) were significantly more common in the nizatidine group. A variety of less common events was also reported, it was not possible to determine whether these were caused by nizatidine.

Hepatic — Hepatocellular injury, evidenced by elevated liver enzyme tests [SGOT (AST), SGPT (ALT), or alkaline phosphatase], occurred in some patients and was possibly or probably related to nizatidine. In some cases, there was marked elevation of SGOT, SGPT enzymes (greater than 500 IU/L) and in a single instance, SGPT was greater than 2,000 IU/L. The overall rate of occurrences of elevated liver enzymes and elevations to three times the upper limit of normal, however, did not significantly differ from the rate of liver enzyme abnormalities in placebo-treated patients. All abnormalities were reversible after discontinuation of Axid.

Cardiovascular — In clinical pharmacology studies, short episodes of asymptomatic ventricular tachycardia occurred in two individuals administered Axid and in three untreated subjects.

CNS — Rare cases of reversible mental confusion have been reported.

Endocrine — Clinical pharmacology studies and controlled clinical trials showed no evidence of antiandrogenic activity due to Axid. Impotence and decreased libido were reported with equal frequency by patients who received Axid and by those given placebo. Rare reports of gynecomastia occurred.

Hematologic — Fatal thrombocytopenia was reported in a patient who was treated with Axid and another H₂-receptor antagonist. On previous occasions, this patient had experienced thrombocytopenia while taking other drugs. Rare cases of thrombocytopenic purpura have been reported.

Integumental — Sweating and urticaria were reported significantly more frequently in nizatidine- than in placebo-treated patients. Rash and exfoliative dermatitis were also reported.

Hypersensitivity — As with other H₂-receptor antagonists, rare cases of anaphylaxis following administration of nizatidine have been reported. Because cross-sensitivity in this class of compounds has been observed, H₂-receptor antagonists should not be administered to individuals with a history of previous hypersensitivity to these agents. Rare episodes of hypersensitivity reactions (eg, bronchospasm, laryngeal edema, rash, and eosinophilia) have been reported.

Other — Hypernatremia unassociated with gout or nephrolithiasis was reported. Eosinophilia, fever, and nausea related to nizatidine administration have been reported.

Overdosage: Overdoses of Axid have been reported rarely. The following is provided to serve as a guide should such an overdose be encountered.

Signs and Symptoms — There is little clinical experience with overdosage of Axid in humans. Test animals that received large doses of nizatidine have exhibited cholinergic-type effects, including lacrimation, salivation, emesis, miosis, and diarrhea. Single oral doses of 800 mg/kg in dogs and of 1,200 mg/kg in monkeys were not lethal. Intravenous median lethal doses in the rat and mouse were 301 mg/kg and 232 mg/kg, respectively.

Treatment — To obtain up-to-date information about the treatment of overdose, a good resource is your certified regional Poison Control Center. Telephone numbers of certified poison control centers are listed in the Physicians' Desk Reference (PDR). In managing overdosage, consider the possibility of multiple drug overdoses, interaction among drugs, and unusual drug kinetics in your patient.

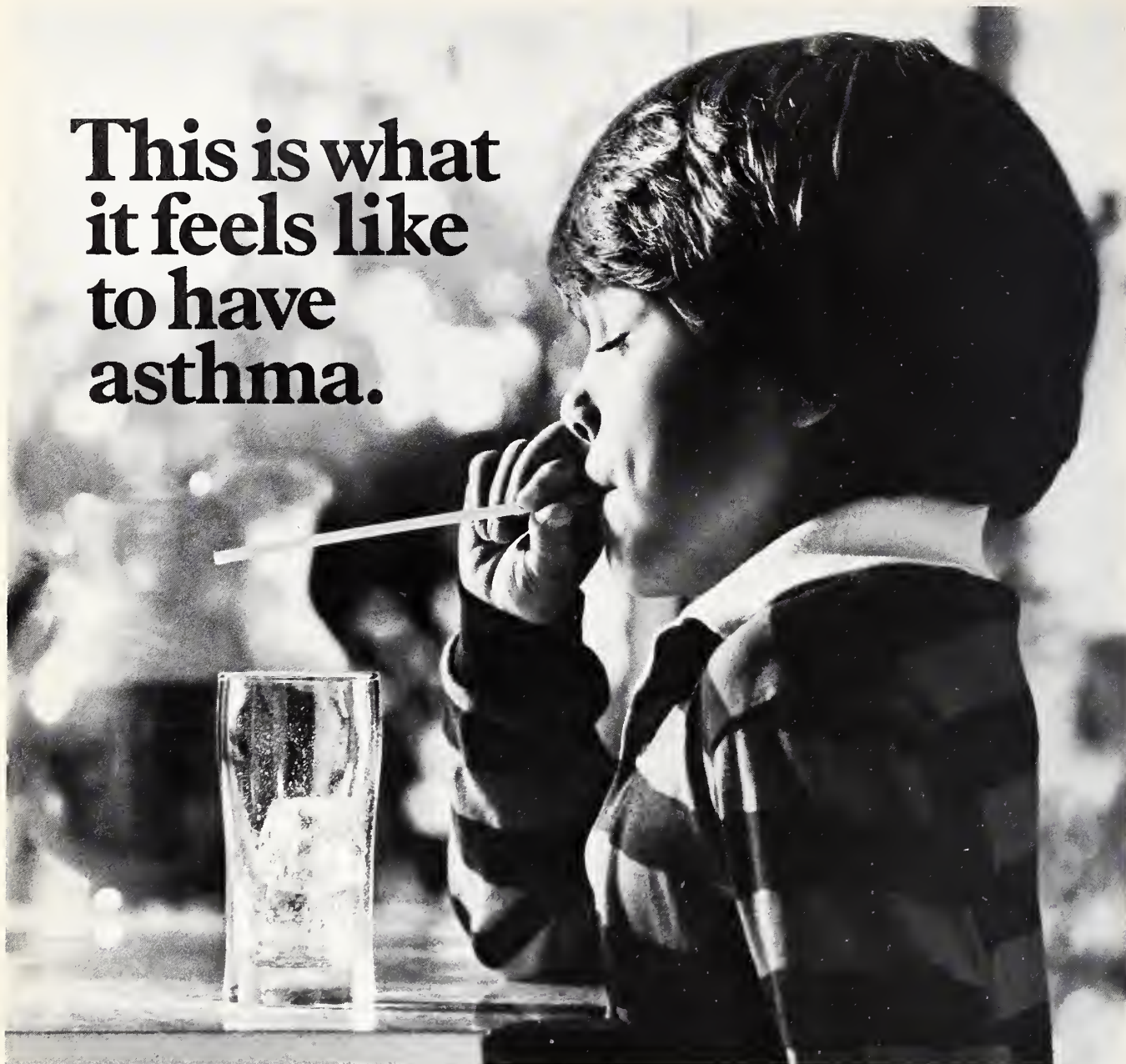
If overdosage occurs, use of activated charcoal, emesis, or lavage should be considered along with clinical monitoring and supportive therapy. Renal dialysis for four to six hours increased plasma clearance.

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Annual Seminar of the Arkansas Society of Medical Assistants. Sponsored by the AAMA. Inn of the Ozarks, Eureka Springs. Registration fees: Members, \$55; Non-members, \$80; Students & retired Members, \$20; Students seminar only, \$10; Barbecue, \$15. Room reservations: Inn of the Ozarks, (501) 253-9768. Further information, Teresa Crisco, RVT, Post Office Box 159, Searcy, AR 72142.

MAY 4-6

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MAY 12-13

Second Annual Contact Lens Course. Sponsored by Washington University School of Medicine. Washington University Medical Center, St. Louis, MO. Seven and one-quarter Category I credit hours available. Fee: \$100. Further information: Cathy Caruso, Washington University School of Medicine, 660 South Euclid, Box 8063, St. Louis, MO 63110; (800) 325-9862.

MAY 18-20

Advances in Pediatrics. Sponsored by the American Academy of Pediatrics. Mariner's Inn, Hilton Head Island, South Carolina. Sixteen Category I credit hours. Fees: AAP Resident Fellow or Candidate Fellow, \$220; AAP Fellow, \$300; Non-member physician, \$365.00; Allied Health Professional, \$220. Further information: CME Registration, Department of Education, AAP, Post Office Box 927, Elk Grove Village, IL; 1 (800) 421-0589.

JUNE 8-10

Cancer Management Course. Sponsored by the American College of Surgeons. Presented by Robert H. Jancs, M.D., James H. Bledsoe, M.D., John B. Burge, M.D. Capital Hotel, Little Rock. Fees: \$275, Fellows, participants in Candidate Group, and residents; all others, \$350. For further information, contact Course Coordinator Clifola Coleman, at 664-4050, extension 401.

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May 2, 12:30 p.m. Presented by L. C. Price, M.D. Sponsored by AHEC - Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

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May 3, 12:30 p.m. Presented by Mary Stoglin, MSN. Sponsored by AHEC-Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Emergency Medicine Update

May 4-5, time to be announced. Sponsored by Baptist Medical Center. J. A. Gilbreath Conference Center. Further information: Baptist Medical Center Medical Education, 227-2672.

Arkansas Hand Society Annual Meeting

May 5-6, 1:00 6:00 p.m. Presented by Marcia L. Hixon, M.D. Sponsored by UAMS. Gaston's White River Resort, Lakeview, AR. 10 Category I credit hours.

Annual W. W. Stead Arkansas Chest Symposium: Respiratory Failure

May 6-7, Saturday, 9:00 a.m. - 3:00 p.m.; Sunday, 9:00 a.m. - 12:00 noon. Presented by F. Charles Hiller, M.D. and Marcia L. Erbland, M.D. Sponsored by UAMS. Ozark Folk Center, Mountain View, AR. 6.75 Category I credit hours available. Fee to be announced.

Cholesterol & Coronary Disease, Reducing the Risk

May 9, 12:00 noon. Presented by Wayne Peters, M.D. Sponsored by AHEC-Fort Smith. Seventh Floor Dining Room, Sparks Regional Medical Center. One Category I credit hour.

Medicaid Changes/Welfare Reform

May 11, 12:30 p.m. Presented by Ralph Holt. Sponsored by AHEC Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Kids, Kidneys and Lytes

May 13, 8:00 a.m. - 4:00 p.m. Presented by Russell Chesncy, M.D.; Watson Arnold, M.D.; Eileen Ellis, M.D.; Tom Wells, M.D.; and Robert Fiser, M.D. Sponsored by Arkansas Children's Hospital and the Arkansas Chapter, American Academy of Pediatrics. Sturgis Auditorium, Arkansas Children's Hospital. Five Category I credit hours. Fee: \$25.00. Make checks payable to Arkansas Children's Hospital and send it to: Blanche Moore, Director of Continuing Education, ACH, 800 Marshall, Little Rock, AR 72202.

Evaluation of Proteinuria in Children

May 16, 12:00 noon. Presented by Watson Arnold, M.D. Sponsored by AHEC Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Treatment of Serious Infections in Children

May 16, 7:00 p.m. Sponsored by the Baxter County Regional Hospital CME Program. Baxter County Re-

gional Hospital Education Building, Mountain Home. Two Category I credit hours. Further information: Chuck Riley, R.N., CME Coordinator, 624 Hospital Drive, Mountain Home, AR 72653, (501) 425-1446.

Tumor Conference

May 17, 12:00 noon. Presented by Bill Steinsiek, M.D. Sponsored by AHEC - Fort Smith. Fourth Floor Conference Room, Sparks Regional Medical Center. One Category I credit hour.

Illicit Drugs

May 18, 12:30 p.m. Presented by Pam Gort Dupont. Sponsored by AHEC Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

Tumor Conference

May 23, 12:00 noon. Presented by Bill Steinsiek, M.D. Sponsored by AHEC Fort Smith. Fourth Floor Conference Room, Sparks Regional Medical Center. One Category I credit hour.

Smoking Cessation

June 7, 12:30 p.m. Presented by Russell Williams, ACSW. Sponsored by AHEC Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

From the Bench to the Bedside

June 10, 8:00 a.m. Presented by D. H. Berry, M.D. and Donald L. Miller, M.D. Sponsored by UAMS. UAMS Education Building, Room G/141 A & B, with tours to follow. Four Category I credit hours.

ATLS Provider Course

June 9-11, time to be announced. Presented by Robert W. Barnes, M.D. and Charles D. Mabry, M.D. Sponsored by UAMS. UAMS Education Building. Sixteen Category I credit hours. Fee: \$475.00.

Battering Families

June 20, 12:30 p.m. Presented by Don Beebe, LCSW. Sponsored by AHEC Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

11th Annual Family Practice Review

June 23-25, Friday and Saturday, 8:00 a.m. - 5:00 p.m.; Sunday, 8:00 p.m. - 2:30 p.m. Presented by Ben N. Saltzman, M.D. Sponsored by UAMS. UAMS Education Building, Room G/131. 20.25 Category I credit. Fee: \$200, physicians; \$100, physician assistants; \$35, residents.

Recurring Education Programs

As organizations accredited for continuing medical education by the Arkansas Medical Society, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), Fridays, 12:15 p.m., Conference Room, Building 1, VAMC
Mortality/Morbidity Conference, fourth Wednesday, 2:45 p.m., Conference Room, Building 1, VAMC

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon, varying topics, alternating Fridays, 12:30 p.m., Fordyce Room, AMI National Park Medical Center

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 1:30 p.m., Second Floor Classroom
Genetics Conference, Wednesdays, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Second Floor Classroom
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Sturgis Building, Rooms S120-121
Problem Case Conference, Fridays, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium. A meal is provided.
Cancer Conference, third and fourth Thursday, 12:00 noon, Southwestern Bell Room A meal is provided.
General Medicine Journal Club, Tuesdays, 12:00 noon, Conference Room 1. A meal is provided.
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library. A meal is provided.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Arkla Room. Refreshments are provided.
Neuropathology Conference, third Tuesday, 5:00 p.m., Room S1174K, Laboratory. Refreshments are provided.
Pediatric Conference, first Tuesday, 12:30 p.m., Vincent de Paul Room. A meal is provided.
Peripheral Vascular Disease Conference, fourth Tuesday, 6:00 p.m., Arkla Room. A meal is provided.
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, Southwestern Bell/Arkla Rooms. A meal is provided.

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
GI Conference, third Thursday, 12:00 noon, Conference Room 1.
Grand Rounds Conference, Wednesdays, 12:00 noon, Conference Room 1. Lectures and case presentations. A light lunch is provided.
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. A light lunch is provided.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES - LITTLE ROCK

ACRC/CARTI Tumor Conference, Wednesdays, 12:00 noon, CARTI Auditorium, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Conference Series, Wednesdays, 4:00 p.m., UAMS Education Building, Room G/110 A&B
CARTI North Tumor Board Cancer Conference, second Wednesday, 12:00 noon, CARTI North, Searcy
Child Psychiatry Clinical Case Conference, first Friday, 1:00 p.m., Arkansas Children's Hospital, Child Study Center Conference Room H5727
Child Psychiatry Research Review, fourth Friday, 1:00 p.m., Arkansas Children's Hospital, Child Study Center Conference Room H5727
Emergency Medicine Didactic Conference 1, Thursdays, 12:00 noon. UAMS Education Building, Room G/110A&B.
Emergency Medicine Didactic Conference 2, Thursdays, 1:00 p.m., UAMS Education Building, Room G/110A&B
Emergency Medicine Grand Rounds 1, third Tuesday, 3:00 p.m., UAMS Education Building, Room B/106A&B
Emergency Medicine Grand Rounds 2, third Tuesday, 4:00 p.m., UAMS Education Building, Room B/106A&B
Emergency Medicine Morbidity and Mortality Conference, fourth Tuesday, 4:00 p.m., UAMS Education Building, Room B/106A&B
Emergency Medicine Radiology Conference, fourth Tuesday, 3:00 p.m., UAMS Education Building, Room B/106A&B
Emergency Medicine Toxicology Conference, first Tuesday, 4:00 p.m., UAMS Education Building, Room B/106A&B
Emergency Medicine Toxicology Rounds, Tuesdays, 3:00 p.m., UAMS Education Building, Room B/106A7B
Interdisciplinary Gynecologic Cancer Conference, Fridays, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education Building, Room G/131A&B
Medicine Research Conference, three Wednesdays per month, 4:30 p.m. Shorey Building, Room 3506
Neurology Clinical Case Conference, Thursdays, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.

Neuropathology Conference, Thursdays, 10:00 p.m., UAMS Autopsy Room
Neuroscience Conference (Basic), Mondays, 8:00 a.m., UAMS 7D33.
Ob/Gyn Grand Rounds, Wednesdays, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150
Orthopaedic Basic Science Conference, occasional Tuesdays, 11:00 a.m., UAMS Education Bldg., Room B/135
Orthopaedic Bibliography Conference, Tuesdays, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, Tuesdays, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building, Room 159
Surgery Fundamental Sciences Conference, first Tuesday, 6:00 p.m., UAMS Chancellor's Area, Conference Room B-2
Surgery Grand Rounds, one Saturday per month., 8:00 a.m., UAMS Education Building, Room G/141A
Surgery Morbidity and Mortality Conference, Wednesdays, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Resident Case Conference, Mondays, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Review Conference, Mondays, 6:00 p.m., UAMS Education Building, Room G/141A
Urology Basic Sciences Conference, second Tuesday, 5:00 p.m., UAMS Education Building, Room G/106A&B
Urology Clinical Didactic Conference, third Tuesday, 5:00 p.m., UAMS Urology Office, Room 2508
Urology Conference (Pediatric), once monthly, 5:00 p.m., Arkansas Children's Hospital, Sturgis Building, Clinic 2
Urology Core Conference, once or twice monthly, 5:00 p.m., UAMS Urology Office, Room 2508
Urology Grand Rounds, second and fourth Tuesday, 5:00 p.m., VAMC-LR (4D)
Urology Morbidity and Mortality Conference, last Wednesday, 5:00 p.m., UAMS Urology Office, Room 2508
Urology Teaching Conference, one or twice monthly, 5:00 p.m., UAMS Urology Office, Room 2508
Uro-Radiology Workshop (Urologic Imaging), once monthly, 5:00 p.m., UAMS Urology Office, Room 2508
VA Chest Conference (Combined Surgical/Medical Chest Conference), alternating Mondays, 12:15 p.m., VAMC-LR, Room 2D109
VA Diagnostic Imaging Conference, Monday-Thursday, 8:00 a.m., VAMC-LR Nuclear Medicine Conference Room, Room 1D173
VA Lung Cancer Conference (combined Medical/Surgical Lung Cancer Conference), Tuesdays, 3:00 p.m., LRVA, Room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Building 68
VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., VAMC-NLR Building 68, Room 118 or Arkansas Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, Room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine, Thursdays, 8:00 a.m., VAMC-NLR Building 68, Room 118
VA Weekly Tumor Conference, Tuesdays, 4:00 p.m., VAMC-LR, Pathology Conference Room
Vascular/Radiology Conference, Tuesdays, 5:00 p.m., UAMS Education Building, Room G/131A&B

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Warner Brown Hospital
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pediatric Conference, third Friday, 12:15 p.m., Union Medical Center.
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

Cardiology Lecture Series, first Monday, 1:00 p.m., Washington Regional Medical Center
Family Medicine Conference, varying dates through April, May, and June, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville. Contact AHEC - NW for list of dates.
Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville
Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center

FORT SMITH - AHEC

Internal Medicine, first Tuesday, 12:30 p.m., Medical Library, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building
Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould
Cherokee Village Tumor Conference, third Monday, every four months, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village.
Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room
Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville
Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room
Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, MO
Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro
Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas
Neurological-Neurosurgical Conference, first Monday, 12:00 noon, St. Bernard's Dietary Conference Room
Neuroradiology Conference, second Friday, 12:00 noon, St. Bernard's Dietary Conference Room
Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital
Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room
Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.

Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.
Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room

PINE BLUFF-AHEC

Behavioral Science Conference, first and third Thursday, 12:00 noon, Jefferson Regional Medical Center
Chest Conference, second and fourth Friday, 12:00 noon, Jefferson Regional Medical Center
Family Practice Conference, first and fourth Tuesday, 12:00 noon, Jefferson Regional Medical Center
Geriatrics Conference, third Friday, 12:00 noon, Jefferson Regional Medical Center
Internal Medicine Conference, second and fourth Wednesday, 12:00 noon, Jefferson Regional Medical Center
Obstetrics/Gynecology Conference, second Tuesday, 12:00 noon, Jefferson Regional Medical Center
Orthopedic Case Conference, second and fourth Thursday, 12:00 noon, Jefferson Regional Medical Center.
Pediatric Conference, third Wednesday, 12:00 noon, Jefferson Regional Medical Center
Radiology Conference, third Tuesday, 12:00 noon, Jefferson Regional Medical Center
Southeast Arkansas Medical Lecture Series, fourth Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.
Surgery Conference, first Friday, 12:00 noon, Jefferson Regional Medical Center
Tumor Conference, first Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Cardiology Conference, Fridays, 12:00 noon, alternates between St. Michael Hospital and Wadley Regional Medical Center
Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital.
Cine Radiology, second Friday, 12:00 noon, Wadley Regional Medical Center.
Echo-Cardiology, fourth Friday, 12:00 noon, Wadley Regional Medical Center
Internal Medicine Conference, second Tuesday, 12:00 noon, alternates between St. Michael Hospital and Wadley Regional Medical Center
Neuro-Radiology Conference, second and fourth Wednesday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Surgeons Pathology Conference, second Tuesday, 7:00 a.m. breakfast, Wadley Regional Medical Center
Tumor Conference, first Wednesday, 7:00 a.m. breakfast, St. Michael Hospital

AMS NEWSMAKERS

Sandra Young, M.D., an emergency medicine physician in Russellville, recently spoke about the Mothers Against Drunk Driving (MADD) program at a weekly meeting of the Russellville Rotary Club. Dr. Young told the group that 61% of the fatal traffic accidents in Pope County are alcohol-related.

The Union County board of the American Cancer Society has elected new officers for 1989. Among those elected were **Bill Scurlock, M.D.**, president; and **Srini Vasan, M.D.**, vice-president. Dr. Scurlock is a general surgeon and Dr. Vasan practices thoracic surgery. Both physicians practice in El Dorado.

Kenneth Wallace, M.D., an ophthalmologist, has been elected chairman of the medical staff board of advisors for St. Edward Mercy Medical Center in Fort Smith.

The Board of Councilors of the American Academy of Orthopedic Surgeons has a new member in **Charles A. Ledbetter, M.D.** Dr. Ledbetter was recently inducted into the group which is the governing body for the Academy. Dr. Ledbetter practices in Harrison.

James R. Weber, M.D., a Jacksonville family practitioner and president-elect of the Arkansas Medical

Society, was recently appointed to the American Academy of Family Physicians' Commission on Health Care Services. The Commission studies and develops recommendations concerning delivery of health care services and payment for those services.

Chief of the Memorial Hospital Professional Staff is **Jock Cobb, M.D.**, a North Little Rock family practitioner. Dr. Cobb has been on staff at the hospital since 1971.

Michael Langley, M.D., a general surgeon from Walnut Ridge, was in Haiti for a teaching and mission trip. During the eight-day trip, Dr. Langley taught Haitian physicians surgical techniques and procedures.

Gene Ring, M.D., was honored as a Paul Harris Fellow by the Dardanelle Rotary Club. Dr. Ring is a family practitioner.

New officers of the Washington Regional Medical Center in Fayetteville were recently announced. Appointments are: **W. Duke Harris, M.D.**, orthopedic surgeon, chief of medical staff; **Hugh Higginbotham, M.D.**, internist, vice-chairman; and **M. Gareth Eck, M.D.**, surgeon, chairman of the department of surgery. All three physicians practice in Fayetteville.

NEW MEMBERS

CRAIGHEAD-POINSETT MEDICAL SOCIETY

Herman, Ellen N., Child and Adolescent Psychiatry, Jonesboro. Born August 12, 1949, Sharon, PA. Pre-medical education, Austin College, Sherman, TX, B.A., 1971; Columbia University, New York, NY. Medical education, University of Texas Medical School, Houston, 1978. Internship/residency, University of Texas Medical School of Medicine, Houston. Practice experience, 4 years, Houston, TX. Teaching appointments, Clinical Assistant Professor, University of Texas Medical School, Houston. Board certified, psychiatry and neurology.

Schweitzer, Terri Y., Pathology, Jonesboro. Born June 27 1955, El Paso, TX. Pre-medical education, Baylor University, University of Texas, Arlington, B.A. 1977. Medical education, University Texas Health Sciences Center, San Antonio, 1983. Internship, Medical Center Hospital, San Antonio. Residency, Scott and White Memorial Hospital, Temple, TX. Board certified, Pathology. Member, AMA, CAP, ASCP, Texas Society of Pathologists.

DREW COUNTY MEDICAL SOCIETY

Burns, Robert E., Family Practice, Monticello. Born September 29, 1953, El Dorado, AR. Pre-medical education, University of Arkansas, Monticello. Medical education, University of Arkansas for Medical Sciences, 1979. Residency, UAMS. Practice experience, 1 year, emergency medicine, AR; 2 years, family practice, Monticello, 5 years, emergency medicine, Monroe, LA. Board eligible.

LONOKE COUNTY MEDICAL SOCIETY

Davidson, Andy M., Family Practice, Cabot. Born March 18, 1956, Corning, AR. Pre-medical education, Arkansas State University, 1978. Medical education, University of Arkansas for Medical Sciences, 1982. Internship, University of Alabama, Huntsville. Practice experience, 5 years, Batesville, AR; 6 months, Cabot, AR. Member, AAFP.

MILLER COUNTY MEDICAL SOCIETY

Brown, Sam F., Family Practice, Texarkana, TX. Born August 15, 1944, Parisburg, VA. Pre-medical education, Henderson State University, B.S., 1966. Medical education, UAMS, 1970. Internship, UAMS. Practice experience, 18 years, Texarkana, AR. Teaching appointments, Associate Professor, UAMS. Other, President-elect, AAFP. Board certified, Family Practice. Member, AAFP, Bowie County Medical Society.

Cummins, J. Craig, Family Practice, Texarkana, TX. Born December 27, 1958, Conway, AR. Pre-medical education, University of Central Arkansas, B.S., 1981. Medical education, UAMS, 1985. Internship/residency, UAMS-AHEC. Board certified, AAFP. Member, AAFP, AMA.

Howard, Glenn M., Emergency Medicine, Texarkana, AR. Born January 12, 1952, Arlington, VA. Pre-medical education, Wake Forest University, B.A., 1974. Medical education, George Washington University School of Medicine, Washington, D.C., 1978. Internship, William Beaumont Army Medical Center, El Paso, TX. Military record, 1978-81, El Paso, TX and Mannheim, West Germany. Practice experience, 2 years, FL. Board certified.

Norris, John A., Vascular and General Surgery, Texarkana, TX. Born September 19, 1946, Fort Worth, TX. Pre-medical education, Baylor University, Waco, TX, B.A., 1969. Medical education, Texas Tech University School of Medicine, Lubbock, TX, 1975. Internship, Parkland Memorial Hospital, Dallas, TX. Residency, Charity Hospital of Louisiana, New Orleans and Baylor University Medical Center, Dallas. Board certified.

Patton, Robert C., Family Practice, Lewisville. Born March 10, 1947, Magnolia, AR. Pre-medical education, University of Arkansas, B.A., 1969. Medical education, University of Arkansas for Medical Sciences, 1973. Internship, VAMC. Residency, NRMJ Jacksonville, FL. Practice experience, 2 years, Stamps, AR; 6+ years, USNR; 6 years, Lewisville. Board certified, family practice.

Robbins, Joseph R., Radiology, Texarkana, TX. Born January 10, 1958, Fort Smith. Pre-medical education, University of Arkansas, Fayetteville, B.A., 1980. Medical education, University of Arkansas for Medical Sciences, 1984. Residency, UAMS. Board certified.

Vereen, Lowell E., Pulmonary Medicine, Texarkana, TX. Born August 1, 1954, Fort Worth, TX. Pre-medical education, University of Texas, Arlington. Medical education, University of Texas, Galveston, 1980. Internship/residency, Louisiana State University Medical Center. Practice experience, 3+ years, Texarkana. Board certified, internal and pulmonary medicine.

POPE COUNTY MEDICAL SOCIETY

Kerin, Douglas, Radiology, Russellville. Born September 28, 1952, France. Pre-medical education, University of Pennsylvania, B.A., 1974. Medical education, Columbia University, 1978. Internship/residency, UCLA Medical Center. Practice experience, 4 years, New York, NY. Board certified, radiology. Member, ASN.

Killingsworth, Stephen M., Otolaryngology and Facial Plastic Surgery, Russellville. Born November 25, 1956, El Dorado, AR. Pre-medical education, University of Arkansas, B.S., 1979. Medical education, University of Arkansas for Medical Sciences, 1983. Internship/residency, UAMS. Board certified, otolaryngology. Member, American Academy of Otolaryngology, AMA.

PULASKI COUNTY MEDICAL SOCIETY

Budhraj, Meenakshi, Gastroenterology, Little Rock. Born, August 29, 1952, India. Pre-medical education, Government College for Women, India, 1969. Medical education, Christian Medical College, India, 1975. Internship/residency, University of Cincinnati, Ohio; Cook County Hospital, Chicago. Practice experience, 2 years, University of Nevada, Reno. Board certified, internal medicine and gastroenterology.

Cain, Thomas D., Internal Medicine and Geriatrics, Little Rock. Born January 24, 1949, Hot Springs. Pre-medical education, Ouachita Baptist and University of Arkansas, Fayetteville, B.S., 1971. Medical education, UAMS, 1975. Internship/residency, UAMS. Board certified, internal medicine. Member, ACP, AGS.

David, Glenn R., Gastroenterology, Little Rock. Born June 24, 1948, Pocahontas, AR. Pre-medical education, University of Dallas, Irving, B.A., 1970. Medical education, UAMS, 1974. Internship/residency, University of Utah. Practice experience, 10 years, Dallas. Board certified, internal medicine and gastroenterology.

Kumpuris, Dennis D., Gastroenterology, Little Rock. Born January 5, 1948, Little Rock. Pre-medical education, Washington & Lee, Lexington, VA, B.S., 1970. Medical education, Emory University Medical School, Atlanta, GA, 1974. Internship/residency, Emory University Medical School. Board certified, internal medicine. Practice experience, 10 years.

Ross, Cynthia S., Radiology Oncology, Little Rock. Born November 20, 1956, Blytheville, AR. Pre-medical education, University of Arkansas, Fayetteville, B.A., 1978. Medical education, University of Arkansas for Medical Sciences, 1982. Internship/residency, UAMS. Board certified, radiology/therapeutic radiology.

Stallings, James W., Urology, Little Rock. Born April 21, 1948, Little Rock. Pre-medical education, Hendrix College, Conway, B.A., 1970. Medical education, University of Arkansas for Medical Sciences, 1974. Internship/residency, UAMS. Board eligible.

Tirado, Emilio, General Surgery, Little Rock. Born March 7, 1943, Puerto Rico. Pre-medical education, Fordham University, Bronx, New York, B.S., 1965. Medical education, Albany Medical College, Albany, NY, 1969. Internship/residency, Westchester County Medical Center, Valhalla, NY. Board certified, surgery. Member, ACS.

Yocum, John H., Orthopedic Surgery, Little Rock. Born November 22, 1956, El Dorado. Pre-medical

education, Vanderbilt University, Nashville, TN, B.S., 1979. Medical education, University of Arkansas for Medical Sciences, 1983. Internship/residency, University of Louisville, KY. Board eligible, orthopaedic surgery.

SEBASTIAN COUNTY MEDICAL SOCIETY

Ferrell, Jeffrey B., Radiology, Fort Smith. Born July 21, 1956, Little Rock. Pre-medical education, John Brown University, B.S., 1978. Medical education, University of Arkansas for Medical Sciences, 1983. Internship/residency, Baptist Memorial Hospital, Memphis, TN. Member, RSNA.

Sadler, Jr., John E., Pediatric Psychiatry, Fort Smith. Born October 15, 1938, Muskogee, OK. Pre-medical education, Oklahoma State University, B.S., 1960. Medical education, University of Colorado School of Medicine, 1964. Internship/residency, University of Colorado Medical Center. Board certified, psychiatry and neurology. Board eligible, pediatrics. Teaching appointments, Associate Clinical Professor, University of Colorado Health Sciences Center; Assistant Professor of Psychiatry and Pediatrics, University of Colorado Health Sciences Center. Military service, U. S. Army, El Paso, TX, 1970-72.

Studd, James L., Radiation Oncology, Fort Smith. Born July 31, 1957, Longview, TX. Pre-medical education, University of Texas, Austin, B.A., 1979. Medical education, Southwestern Medical School, University of Texas, 1983. Internship, University of Utah Medical Center, Salt Lake City. Residency, University of Utah Medical Center and University of Texas Health Sciences Center, San Antonio. Board eligible.

WASHINGTON COUNTY MEDICAL SOCIETY

Abernathy, Bryan E., Family Practice, Fayetteville. Born October 4, 1956, Beaver, OK. Pre-medical education, Southeastern Oklahoma State University, B.S., 1978. Medical education, University of Oklahoma, Oklahoma City, 1982. Internship/residency, UAMS-AHEC Northwest, Fayetteville. Practice experience, 3 years, Fayetteville. Board certified, family practice.

RESIDENT PHYSICIAN SECTION

Angel, Jeff D., Orthopaedic Surgery. Born February 3, 1962, Little Rock. Pre-medical education, University of Arkansas, Fayetteville, B.S., 1984. Medical school, UAMS, Internship/residency, UAMS.

Daniel, Robert G., Internal Medicine. Born October 6, 1954, Hot Springs. Pre-medical education, Hendrix College, B.A., 1981. Medical education, University of Arkansas for Medical Sciences, 1987. Internship/residency, University of Missouri, Columbia.

Snow, Lisa R., Psychiatry. Born June 11, 1961, Columbus, MS. Pre-medical education, University of

Arkansas, Little Rock, B.A., 1984. Medical education, University of Arkansas for Medical Sciences, 1988. Internship/residency, UAMS.

Rader, George R., Anesthesiology. Born September 9, 1961, Little Rock. Pre-medical education, University of Dallas, Irving, B.S., 1983. Medical education, University

of Arkansas for Medical Sciences. Internship, University of Arkansas for Medical Sciences.

Whitaker, John C., Pediatrics. Born March 7, 1960, Harrison, AR. Pre-medical education, University of Arkansas, Fayetteville, B.S., 1982. Medical education, UAMS. Internship/residency, UAMS.

RESOLUTIONS

Whereas, the members of the Pulaski County Medical Society note with sincere sorrow the recent death of an esteemed member, Charles N. McKenzie, M.D., and

Whereas, he was a devoted member of this Society for twenty-six years and was faithful in contributing to the affairs of the Society for the entire length of his membership, and

Whereas, Dr. McKenzie's genuine concern for the welfare of his patients and his community was widely known and clearly demonstrated by his service to numerous community endeavors and by his leadership role in the formation of Arkansas' first scoliosis screening and treatment program, therefore be it

RESOLVED, that this resolution made a part of the permanent records of the Society, and

RESOLVED, that a copy of this resolution be mailed to Dr. McKenzie's family as an expression of our sincere sympathy, and

RESOLVED, that a copy be forwarded to the *Journal of the Arkansas Medical Society* for publication.

By Order of the Memorials Committee

Adopted Unanimously

Executive Committee

March 15, 1989

Marlon Doucet, M.D., Chairman

Henry Hollenberg, M.D.

Robert Watson, M.D.

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Exercise Testing Raises Serum Cholesterol

Randal F. Hundley, M.D.^{*}, Kim Oelke, BSN, RNP; and Nancy Chesser, LPN

Introduction

Elevated cholesterol is now known to be a major risk factor for development of coronary heart disease. The National Cholesterol Education Program Expert Panel on Selection, Evaluation and Treatment of High Cholesterol in Adults (NCEP) recommendation is that every person over age 20 be screened for hyperlipidemia using a random (i.e., not necessarily fasting) serum cholesterol determination.¹ Oftentimes this initial cholesterol screening will be done during a physician office visit at which exercise testing may be performed. Because of the known effect of regular strenuous exercise on serum lipids (increase in HDL concentration), we wondered whether the acute stress of an exercise test might alter, at least transiently, the serum cholesterol in a given patient. In our office it had been common to draw blood for serum cholesterol either before or after patients had performed exercise tests, since there is no reported acute effect of exercise testing on serum lipids.

We undertook the present study in order to determine whether exercise testing causes any acute changes in serum cholesterol values.

Materials and Methods

A total of 25 subjects participated in this study; they were volunteers and patients presenting to our office (Cardiac Diagnostic Clinic, Little Rock, Arkansas) upon referral for evaluation of definite or suspected cardiovascular disease. There were 15 males and 10 females; and the mean age was 49 ± 11 years (range 26 - 66).

For each patient, a baseline phlebotomy was performed using a Vacutainer system, and symptom-limited graded exercise testing was performed using the Bruce or modified

Bruce protocol. During the recovery phase, a second phlebotomy was performed within 15 minutes of completion of exercise. All samples were analyzed for cholesterol using a dry slide technique (Kodak Ectachem E-700). In addition, HDL cholesterol was measured in 17 subjects using the same technique, but with pretreatment of the samples with dextran sulfate to remove LDL and VLDL cholesterol.

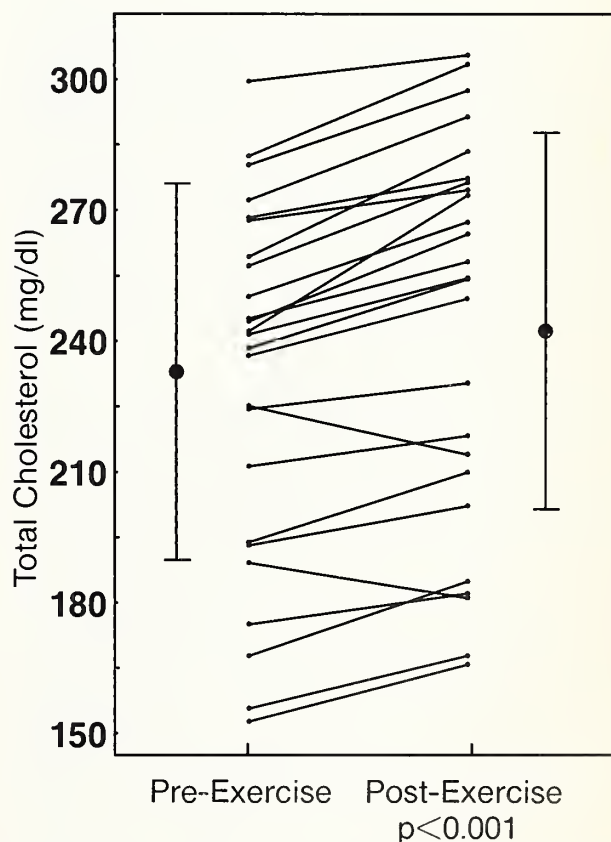


Figure 1. Serum cholesterol before and immediately after exercise testing. Each line represents a single patient. Mean total cholesterol rose from 216 ± 41 mg/dl to 228 ± 44 mg/dl using a paired t-test ($p < 0.001$).

Author's Note: These findings were initially presented at the 60th American Heart Association meeting. The abstract appears in *Circulation* 76 (suppl IV), 1987.

Cardiac Diagnosis Clinic, 360 Doctors Park, Little Rock, Arkansas 72205.

Results

Total exercise time averaged 8.5 ± 3.1 minutes from the start of Stage I of the Bruce protocol (range 3 - 14.5 minutes). The peak heart rate achieved was 153 ± 24 beats per minute (range 107 - 183). Maximum double product was $26,807 \pm 5,010$ (range 18,260 - 36,400). Total serum cholesterol prior to exercise was 216 ± 41 mg/dl (range 138 - 284). The post exercise total cholesterol was 228 ± 44 mg/dl (range 151 - 290). This is a significant rise in post exercise cholesterol of 12.5 ± 9 mg/dl, $p < 0.001$ using a paired t-test (Figure 1).

In the 17 subjects for whom HDL measurements were obtained, the HDL cholesterol pre-exercise ranged from 28 to 67 mg/dl, with a mean of 42 ± 10 mg/dl. Post exercise HDL ranged from 28 to 72 mg/dl, with a mean of 43 ± 12 mg/dl. This is not a significant change in HDL cholesterol (Figure 2).

Further analysis demonstrated no effect of sex, total exercise time, age, peak heart rate, or maximum double product upon the exercise-induced rise in serum cholesterol.

Discussion

This study demonstrates that exercise treadmill testing causes a small but significant rise in serum cholesterol. The rise in serum cholesterol is not attributable to an exercise-induced increase in HDL cholesterol. The practical implication of this finding is simply that blood specimens for cholesterol measurement should be drawn prior to exercise testing. When cholesterol screening is carried out at health fairs which include jogging, racing, or other exercise, participants should be cautioned to have cholesterol measurements done before exercise. This study did not undertake to determine at what point after termination of exercise cholesterol returns to baseline. Nor did the study investigate the mechanism for the rise in serum cholesterol. We had a very simple objective - namely to determine whether there is any need to consistently draw blood for lipid measurements before exercise testing is carried out.

The frequency of cholesterol measurement has greatly increased since 1984. A significant impact of the Lipid Research Clinic Coronary Primary Prevention Trial has been an increased awareness of the importance of cholesterol as a risk factor in coronary artery disease. More and more patients are requesting that their cholesterol be measured, and more physicians and clinics are doing cholesterol screening. Aggressive approaches to the treatment of elevated cholesterol are being utilized as a result of the LRC finding of a 2% decrease in myocardial infarction and coronary heart disease death for every 1% reduction in total cholesterol.²

Treatment of elevated cholesterol is being initiated at levels much lower than those of ten years ago. Thus more people are affected by the results of cholesterol testing. A few milligrams difference in the total cholesterol may make a difference in the choice of treatment - diet alone or diet plus medication. Of course, decisions to treat hyperlipidemia should not be based on a single measurement. Randomly obtained total cholesterol values of greater than 200 should

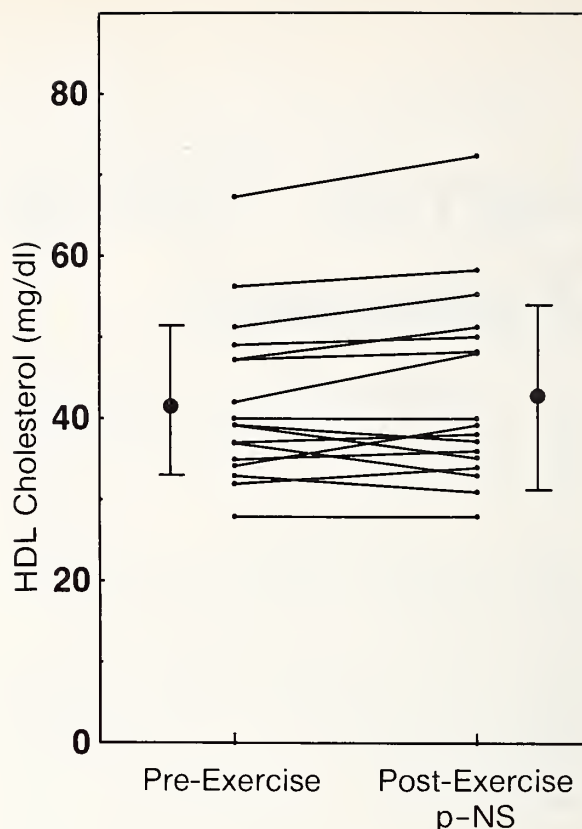


Figure 2. Serum HDL before and immediately after exercise testing. Each line represents a single patient. The mean HDL pre-exercise was 42 ± 10 mg/dl and post exercise was 43 ± 12 mg/dl ($p = NS$ by paired t-testing).

be followed up with a fasting lipid profile. An exercise induced small false elevation in the total cholesterol may lead to expensive, inconvenient, and unnecessary fasting lipid determination. Therefore, we recommend that total cholesterol measurement be obtained prior to acute exercise in order to avoid false elevations which might affect the nature of cholesterol treatment.

Acknowledgements

We are grateful to Denise Pesek for preparation of the manuscript, to Arkansas Pathology Laboratories, Little Rock, Arkansas, for performing lipid analyses without charge for the extra research samples, to Jan Worden, RN, for assistance with the study, and to Richard H. Martin, M.D., for reviewing the manuscript.

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In Vitro Fertilization: An Overview

Steve N. London, M.D.*; Michael M. Miller, M.D.; and Glenn A. Weitzman, M.D.

The advanced reproductive technologies are an acceptably safe but invasive method to treat infertility. The decision to proceed with IVF/ET should be based on 1) a complete infertility investigation, 2) an understanding by the couple of the emotional, physical and financial aspects of the process and 3) an understanding by physicians of the real advantages and disadvantages of the procedures.

Introduction

The general public has been bombarded by television and magazine reports about IVF/ET (in vitro fertilization and embryo transfer) and GIFT (gamete intrafallopian tube transfer). Therefore, every physician should have a basic knowledge of the methodology, the applicability to various disease states, and the current success rates of these advanced reproductive technologies.

The need to understand these techniques was heightened by the Arkansas State legislature when it passed a bill mandating health insurance companies cover IVF/ET and GIFT on all policies providing primary maternity benefits. The bill requires the state insurance commissioner to set appropriate regulations.

Who is a Candidate?

One in six couples in America will not have conceived after one year of unprotected intercourse. Thirty percent of this delay will be due to severe oligospermia, 25% to ovulatory problems, 10% to cervical problems, 20% to tubal damage, 30% to endometriosis, 5% to immunologic problems and 5% will be unexplained. Thirty to forty percent of all couples will have more than one problem.¹ Currently, 50-60% of all couples who seek professional help will conceive² and this number should increase with widespread use of the advanced reproductive technologies.

An advanced reproductive technology can be considered to be the final therapy for all forms of infertility except azoospermia, uterine anomalies and anovulation unresponsive to medication (Table I). The belief that IVF/ET should be reserved as a second line therapy is changing. IVF/ET provides better pregnancy rates than microsurgery for women whose tubes are damaged by infection.^{3,4} As pregnancy rates with IVF/ET improve many "conventional" therapies will be discarded.⁴ Advanced reproductive technologies are not experimental; they are a legitimate part of the armamentarium of every fully equipped infertility service.

In Vitro Fertilization/Embryo Transfer (IVF/ET)

The first live birth resulting from this technique occurred on July 25, 1978.⁵ Since then more than 1,000 babies have been born.⁶

Human IVF, simply stated, involves removal of an unfertilized egg from a woman, fertilization of the egg in a laboratory dish and transfer of the fertilized egg to the woman's uterus. IVF/ET can be broken down into the following steps: 1) superovulation (controlled hyperstimulation), 2) aspiration of eggs (follicles/oocytes), 3) embryo culture, 4) embryo transfer and, 5) luteal phase support.

Superovulation

Superovulation refers to the use of ovulation inducing agents to stimulate development of multiple mature follicles in a menstrual cycle. The type of drug(s) used varies from center to center and is constantly changing (Table II).

University of Arkansas for Medical Sciences, Department of Obstetrics and Gynecology, Mail Slot 518, 4301 West Markham Street, Little Rock, Arkansas 72205.

Whichever regimen is utilized, daily medication is administered starting on cycle day 2 or 3. The growth and number of follicles is evaluated by daily pelvic ultrasounds and serum estradiol levels starting on cycle day 6 or 7. An adequate ovarian response is usually achieved by cycle day 9-11. Follicular maturation and quality is assessed with serum estradiol measurements. The pattern of estradiol rise can predict those cycles most likely to result in pregnancy.⁷ After an adequate ovarian response is reached, 10,000 mIU of human chorionic gonadotropin (hCG) is then administered to complete oocyte maturation. At the time of hCG administration serum luteinizing hormone (LH) is measured. The cycle is abandoned if either a spontaneous LH surge is detected or only one or two follicles develop.

Follicular Aspiration

Aspiration is performed 30-34 hours after hCG injection. Timing is critical as spontaneous ovulation occurs approximately 36 hours after hCG injection. A needle is inserted into each follicle and the contents are aspirated.

Laparoscopy was the first technique developed and remains the primary method at most institutions.⁸ Recently transvaginal ultrasound guided needle aspiration has become popular. This method minimizes risk and expense as the procedure can be performed under local anesthesia. While fewer oocytes are recovered, this method can be utilized when laparoscopic recovery is not possible due to the presence of adhesions obscuring the ovary. In the future, sonographic egg recovery is expected to replace laparoscopy as the primary method of oocyte collection. There is a growing body of evidence to suggest this may be preferable as anesthetic and/or CO₂ pneumoperitoneum appear to adversely affect oocyte quality.^{9,10,11}

Embryo Culture

An average of 6 oocytes are retrieved per patient. These oocytes can be classified as either immature, atretic or mature. Correct classification is essential for the best outcome. If sperm and eggs are mixed too early, fertilization will not occur. Mature oocytes are incubated for 3-8 hours prior to insemination while immature oocytes are incubated for at least 24 hours. Approximately 80% of immature oocytes complete the first meiotic division in vitro and 60-85% will fertilize.¹²

Freshly ejaculated sperm cannot fertilize and must be capacitated. Males should have at least 1 million grade 3 motile sperm to participate in IVF. Capacitation is very simple in humans and involves only a four hour culture in a balanced salt solution. Approximately 150,000 motile capacitated sperm are placed with each egg. After 12-18 hours the oocytes are inspected for pronuclear formation. Those oocytes without pronuclei are reinseminated.

After 12-18 hours the fertilized oocytes are transferred from the insemination media (Ham's F-10 + 7.5% fetal cord serum) to growth media (Ham's F-10 + 15% fetal cord serum). All oocytes and embryos are incubated at 37°C in an

Table I. Indications for IVF/ET

Married couple
Good general health
Under age 40 years
Infertility due to:
Fallopian tube damage
Oligospermia
Endometriosis
Cervical factor
Antisperm antibodies
Diethylstilbestrol exposure
Unexplained

atmosphere of 5% oxygen, 5% carbon dioxide and 90% nitrogen.

Fertilization and culture are the most crucial stages of IVF/ET. All media must be carefully prepared and quality tested. Quality control is done using mouse embryos. Virtually all embryos must develop to the blastocyst stage or the media is discarded.

Embryo Transfer

When the now fertilized eggs have been in culture approximately 66 hours they should have reached the 2-8 cell stage. The embryos are then loaded into a special catheter and passed transcervically into the uterus. The catheter is passed until it is within 2-3 mm of the uterine fundus. The embryos are then slowly injected into the uterine cavity. The patient is placed at absolute bedrest for four hours and then discharged to home.

Luteal Support

There is no data substantiating the use of pharmacologic agents to support the luteal phase in IVF/ET cycles. In fact, the only randomized study to investigate this practice failed to show a benefit for luteal hCG injections.¹² However, most programs support the luteal phase. Two protocols are commonly used. The first utilizes 2500 mIU of hCG IM on alternate days for four injections starting on the second day after transfer. The second involves IM administration of 25 mg of progesterone-in-oil daily for 14 days. If the pregnancy test is positive 14 days after transfer, the daily progesterone may be continued or 17-hydroxyprogesterone may be given weekly for the first 10-18 weeks of gestation.

Results

If one hundred patients state superovulation, an average of 70 will reach follicular aspiration. Approximately, 60 (85%) of these 70 patients will have at least one embryo transferred.⁸

The probability of pregnancy per embryo transfer has been reported as high as 20, 29, or 42% with one, two or three embryos, respectively.¹⁴ If the embryos developed from cultured immature oocytes the pregnancy rate is approxi-

mately 10%, regardless of the number transferred.¹⁵ The average clinical pregnancy rate (fetal heart activity detected) per embryo transfer as reported by the IVF/ET National Registry was 14.1% in 1985 and 16.9% in 1986.⁸ In repeat attempts the clinical pregnancy rate remains constant at 15% per cycle. Therefore, a pregnancy rate of 50% has been reported by 4-5 cycles and a rate of 75% is predicted by 9 cycles.¹⁶

The first reported human pregnancy following IVF-ET was a tubal gestation.¹⁷ Five percent of all in vitro pregnancies are ectopic gestations.⁸ This is slightly higher than the natural incidence of ectopic pregnancy but lower than the rate following tubal surgery.¹⁸

The incidence of multiple birth following IVF/ET is 18%.¹⁹ Eighty-eight percent of these multiple gestations are twins. The risk of achieving a pregnancy with more than three viable fetuses increase when more than four embryos are transferred. As in vitro becomes more successful it is possible that the incidence of multiple gestation will increase.

The spontaneous abortion rate reported by the National IVF/ET registry is 35%,⁸ substantially higher than that of "natural" conceptions.²⁰ Fortunately, there does not appear to be any higher incidence of birth defects in babies born by in vitro fertilization when compared to the general population.^{8,19} As the oldest child born thru in vitro fertilization is only 9 years old, long term neuro-behavioral studies are unavailable.

GIFT

(Gamete Intra-Fallopian Tube Transfer)

GIFT is a variation of IVF. The patient undergoes an identical superovulation procedure. When a suitable ovarian response is obtained the patient undergoes laparoscopy under general anesthesia. Following follicular aspiration, the mature oocytes are identified and placed in an embryo transfer catheter. Precapacitated sperm are placed in the same catheter, but remain separated from the oocytes by a small air bubble. The catheter is then inserted 2-4 cm into the distal end of the fallopian tubes. The gametes are deposited in the ampulla where mixing and fertilization occur.

A 35-40% pregnancy rate per cycle has been reported with this technique.²² Initially, it was felt that this technique achieved a higher pregnancy rate than IVF but the marked

difference between patient populations undergoing these two procedures prevented accurate comparison. Several studies have reported poor results with IVF in patients with significant pelvic adhesions.^{4,23,24} This is the most common indication for IVF/ET but excludes patients from GIFT therapy. A prospective randomized study between GIFT and IVF/ET showed no difference in pregnancy rates in patients with normal tubes and either unexplained or male factor infertility.²⁵ A similar study showed no difference in pregnancy rates between IVF/ET and GIFT in patients with stage 2-3 endometriosis.²⁶ In addition, similar pregnancy rates have been achieved in patients with unexplained infertility following GIFT (28%)²⁷, IVF.ET (37%)²⁸, and superovulation with intrauterine insemination (40%).²⁹ This suggests GIFT's success may be the result of superovulation and a well-timed insemination. Prospective controlled studies are required comparing superovulation with GIFT to determine if GIFT is indicated in this group of patients.

GIFT has several limitations. First, it is applicable only to patients who have normal fallopian tubes. Secondly, GIFT is more expensive than IVF if the egg recovery for IVF is done by sonographic needle guidance. Thirdly, GIFT does not allow determination of fertilization capability in male factor infertility.

GIFT has one advantage over IVF/ET, no excess human embryos are obtained. Approximately 20% of all IVF/ET cycles result in more than four embryos. The fate of the remaining embryos presents several dilemmas.

Discarding human embryos is unacceptable. Experimenting on human embryos is so controversial that very few centers in the world and none in the United States perform these experiments. However, in the future, society must construct ethical guidelines for this possibility.

Excess embryos can be donated from one woman to another. This technique has already resulted in live births. Thirteen women with Turner's syndrome (45 XO with streak gonads) and 10 with premature ovarian failure (POF) have now delivered in the past two years using donor embryos.^{30,31,32} GIFT has also been used to successfully establish pregnancies in patients with POF utilizing donated excess eggs and husband's sperm.³³

Currently most excess embryos are frozen. These embryos are then returned to the mother's uterus in a natural cycle if pregnancy does not occur in the IVF cycle. Pregnancy rates with frozen embryos have been dismal,⁸ but recent reports indicate a pregnancy rate of greater than 10% per cycle with transferred frozen embryos.^{34,35}

IVF/ET and GIFT at UAMS

The Reproductive Endocrinology Division of the Department of Obstetrics and Gynecology at the University of Arkansas for Medical Sciences is currently providing IVF/ET and GIFT to qualifying patients. The combined hospital and physician charge to patient for laparoscopic recovery and/or GIFT is \$5,695 for the initial cycle and \$5,081 for subsequent cycles. The cost for patients with confirmed

Table II. Superovulation Protocols
Clomiphene citrate
Human menopausal gonadotropin (hMG)
hMG plus clomiphene citrate
Human follicle stimulating hormone (hFSH)
hMG plus hFSH
Gonadotropin releasing hormone (GnRH)
GnRH-agonist plus hMG plus hFSH
GnRH-agonist plus hMG

insurance coverage is \$1,139 for the initial cycle and \$1,016 for repeat cycles. Medications, including hMG/hCG and progesterone cost an additional \$700-\$800 per cycle. The cost of transvaginal oocyte retrieval is \$1,200-\$1,200 less.

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Treatment of Acute Back Pain

Warren C. Boop, Jr., M.D.* and Gary T. Souheaver, Ph.D.

Introduction

The first written report of an injury to the back is attributed to Imhotep, an Egyptian physician treating pyramid construction workers around 2780 B.C. He described a "sprain of a vertebrae in the spine."¹ It was a great step forward when Mixter and Barr³ first described the "ruptured" disc as a cause of back pain in 1934, however, this entity accounts for only 2% of the patients with low back pain. In 1984, \$16 billion was spent in the United States on the treatment of low back pain.² Underlying pathology of any type can be demonstrated in only 15% of low back pain cases.⁴ But most acute low back pain is self-limiting, so extensive and expensive testing (CT scans, MRI, myelograms, x-rays) are not really needed initially in most cases. Studies show that 80% of workers who develop low back pain can return to work within six weeks and an additional 10% can return to work within three months regardless of the treatment received. It is the remaining 10% of the patients who require the more extensive studies, require expenditure of more funds and, therefore, account for 78% of costs.⁵ These patients have more frequent hospitalizations, surgery, psychological impairment and subsequent litigation.

Diagnostic Evaluation

When a patient is first seen for complaints of low back pain, the busy physician may tend to get a brief history and do a brief examination. But this is by far the most important diagnostic tool in the physician's evaluation of low back pain and should be quite thorough. Ancillary studies may be needed with a history of significant trauma (with suspicion of fracture), unexplained weight loss (cancer suspect), bowel or bladder dysfunction or major neuromuscular deficit (possible spinal tumor), or age over 55 years. For other patients, particularly in the absence of physical findings, x-rays need not be obtained unless the pain persists beyond 4-6 weeks (with the exception of those patients in whom litigation may

be involved, in which case the x-rays may be needed for legal purposes and not necessarily for medical reasons).

The clinician evaluates the patient, keeping in mind three major sources of pain. First, the many extraspinal causes of pain such as pelvic disease, renal infection or stone, or even systemic causes such as subacute bacterial endocarditis, collagen vascular disease, and diabetic radiculopathy. Second, spinal disease such as tumor (history of cancer), osteomyelitis (drug abusers and alcoholics), long use of corticosteroids (compression fracture), and, of course, the herniated disc. Third, primary neurologic problems such as nerve tumors (a long and progressive history), herpes zoster (you may see the patient with pain before the rash), arachnoiditis (history of spinal taps, spinal surgery or spinal anesthetics).

Examination should include a back evaluation, e.g., proper alignment and movement of spinous processes, palpable spasm, areas of focal discomfort (diffuse pain is more likely non-organic).

Mechanical dysfunction such as limited straight leg raising will be seen in 95% or more of patients with significant disc herniation, but is also seen in many other cases of back pain. If straight leg raising is not restricted, however, one can be reasonably confident disc herniation is not the cause of the back pain.

The neurologic evaluation concentrates on detecting a suppressed ankle reflex or weakness of plantars or dorsiflexion of the foot (detected most easily by having patient walk on heels or toes). Almost 90% of the patients with significant disc herniation will demonstrate abnormality in one of these functions.

Findings of superficial and diffuse pain, hysterical overreaction, accentuation of pain with axial rotation of shoulders and pelvis together, change of findings with distraction, regional weakness (entire leg) and/or non-anatomic sensory loss (stocking distribution) are non-organic signs seen in some patients with low back pain.⁶ The finding of three or more of these non-organic signs predicts chronic pain and incapacity as well as poor response to treatment. More detailed psychological assessment may be indicated with these findings. These are patients who require expenditure of

University of Arkansas for Medical Sciences, 4301 West Markham, Slot 507, Little Rock, Arkansas 72205.

more time and money and often are influenced by the psycho-social aspects of low back pain, e.g., with secondary gains and/or prominent anxiety or depression.

Learned Pain Behaviors

It is a well-established principle of behavior that organisms learn that which is followed by a significant consequence. In this country, the use of operant behavioral conditioning in the management and understanding of chronic pain was first developed by W. E. Fordyce⁷ at the University of Washington Medical Center. Fordyce and his colleagues were able to convincingly demonstrate that when pain behaviors are seen as "operants on the environment" then we may begin to understand how various verbalizations and exhibitions of "pain" can be maintained beyond an identifiable medical healing period. Chronic pain is best understood as a series of learned behaviors which are reinforced. For example, if work is followed by the consequence of pain, then the patient "learns" that work results in pain. Conversely, if a patient rests after painful activity, then the patients "learns" that rest reduces pain. It can be easily seen how a cycle of decreased physical activity (i.e., rest) results in many "learned pain behaviors" as well as excessive inactivity and poor muscle tone.

The same principles of operant conditioning, i.e., "learning," explains how patients can become dependent upon medications. For example, if each time a patient emits a pain behavior an analgesic follows, then the paradigm is established whereby the patient "learns" to take medications. Thus, without awareness, it is entirely conceivable and predictable that PRN medication for pain will result in over-reliance upon medication. The implications are rather obvious. Specifically, pain behavior should not be followed by an immediate gift of medication. Rather, medication intake should be on a time-contingent basis, rather than response-contingent basis.

The understanding of chronic pain behavior via these learning principles allows the practitioner to better understand how chronic pain can be learned and maintained in the absence of an immediate or identifiable physical/psychological referent. Moreover, once we understand the learning mechanisms, treatment becomes possible via behavioral management. Studies have routinely demonstrated that behavioral treatments for chronic pain problems are quite effective.^{8,9,10,11}

Prevention of Chronic Pain Syndrome

How can physicians decrease the number of patients developing a chronic pain syndrome? Obviously, some factors are beyond our control. Changes in employer attitudes to encourage light duty or part-time return to work rather than be paid for staying sick would be helpful. Administrative changes in the management of work injuries may be as important as medical management.

Yet, physicians are not blameless in this misuse of medical treatment. Earlier concepts of prolonged bed rest result

in increased anxiety, depression, and perhaps most importantly, in poor muscle tone. The experience in pain centers indicates that improved physical fitness, early mobilization of the patient and specific plans for return to work should be the backbone of treatment

Exercise and Education

Research studies do not give evidence to support use of "William's Flexion Exercise".¹² In fact, these exercises actually increase intradiscal pressure, and may delay recovery. On the other hand, stamina building exercise such as walking, swimming and biking have shown a positive influence on preventing recurrence of pain.¹³ Bed rest for no longer than three days followed by daily walking or swimming is now recommended for the patients without neurologic deficit. Also patients have a great need for reassurance and an explanation of symptoms. Education concerning back care, avoidance of lifting heavy objects or bending and twisting the back should be given. The use of narcotic medication may be indicated for first 3 to 7 days, but is almost never indicated for longer than 10 days, and certainly not for long term or for chronic pain. Patients need to understand that pain may increase for the first two weeks of a strengthening exercise program and a lumbar support may be helpful during this time. After the first two weeks, the pain usually subsides and the patient can look forward to prolonged benefit from his increased activity program.

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BRIEF SUMMARY

CARDIZEM® SR
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CONTRAINDICATIONS

CARDIZEM is contraindicated in (1) patients with sick sinus syndrome except in the presence of a functioning ventricular pacemaker, (2) patients with second- or third-degree AV block except in the presence of a functioning ventricular pacemaker, (3) patients with hypotension (less than 90 mm Hg systolic), (4) patients who have demonstrated hypersensitivity to the drug, and (5) patients with acute myocardial infarction and pulmonary congestion documented by x-ray on admission.

WARNINGS

- Cardiac Conduction.** CARDIZEM prolongs AV node refractory periods without significantly prolonging sinus node recovery time, except in patients with sick sinus syndrome. This effect may rarely result in abnormally slow heart rates (particularly in patients with sick sinus syndrome) or second- or third-degree AV block (nine of 2,111 patients or 0.43%). Concomitant use of diltiazem with beta-blockers or digitalis may result in additive effects on cardiac conduction. A patient with Prinzmetal's angina developed periods of asystole (2 to 5 seconds) after a single dose of 60 mg of diltiazem.
- Congestive Heart Failure.** Although diltiazem has a negative inotropic effect in isolated animal tissue preparations, hemodynamic studies in humans with normal ventricular function have not shown a reduction in cardiac index nor consistent negative effects on contractility (dp/dt). An acute study of oral diltiazem in patients with impaired ventricular function (ejection fraction 24% ± 6%) showed improvement in indices of ventricular function without significant decrease in contractile function (dp/dt). Experience with the use of CARDIZEM (diltiazem hydrochloride) in combination with beta-blockers in patients with impaired ventricular function is limited. Caution should be exercised when using this combination.
- Hypotension.** Decreases in blood pressure associated with CARDIZEM therapy may occasionally result in symptomatic hypotension.
- Acute Hepatic Injury.** Mild elevations of transaminases with and without concomitant elevation in alkaline phosphatase and bilirubin have been observed in clinical studies. Such elevations were usually transient and frequently resolved even with continued diltiazem treatment. In rare instances, significant elevations in enzymes such as alkaline phosphatase, LDH, SGPT, SGPT, and other phenomena consistent with acute hepatic injury have been noted. These reactions tended to occur early after therapy initiation (1 to 8 weeks) and have been reversible upon discontinuation of drug therapy. The relationship to CARDIZEM is uncertain in some cases, but probable in some. (See PRECAUTIONS.)

PRECAUTIONS

General. CARDIZEM (diltiazem hydrochloride) is extensively metabolized by the liver and excreted by the kidneys and in bile. As with any drug given over prolonged periods, laboratory parameters should be monitored at regular intervals. The drug should be used with caution in patients with impaired renal or hepatic function. In subacute and chronic dog and rat studies designed to produce toxicity, high doses of diltiazem were associated with hepatic damage. In special subacute hepatic studies, oral doses of 125 mg/kg and higher in rats were associated with histological changes in the liver which were reversible when the drug was discontinued. In dogs, doses of 120 mg/kg were also associated with hepatic changes; however, these changes were reversible with continued dosing. Dermatological events (see ADVERSE REACTIONS section) may be transient and may disappear despite continued use of CARDIZEM. However, skin eruptions progressing to erythema multiforme and/or exfoliative dermatitis have also been infrequently reported. Should a dermatologic reaction persist, the drug should be discontinued.

Drug Interaction. Due to the potential for additive effects, caution and careful titration are warranted in patients receiving CARDIZEM concomitantly with any agents known to affect cardiac contractility and/or conduction. (See WARNINGS.) Pharmacologic studies indicate that there may be additive effects in prolonging AV conduction when using beta-blockers or digitalis concomitantly with CARDIZEM. (See WARNINGS.)

As with all drugs, care should be exercised when treating patients with multiple medications. CARDIZEM undergoes biotransformation by cytochrome P-450 mixed function oxidase. Coadministration of CARDIZEM with other agents which follow the same route of biotransformation may result in the competitive inhibition of metabolism. Dosages of similarly metabolized drugs, particularly those of low therapeutic ratio or in patients with renal and/or hepatic impairment,

may require adjustment when starting or stopping concomitantly administered CARDIZEM to maintain optimum therapeutic blood levels.

Beta-blockers. Controlled and uncontrolled domestic studies suggest that concomitant use of CARDIZEM and beta-blockers or digitalis is usually well tolerated, but available data are not sufficient to predict the effects of concomitant treatment in patients with left ventricular dysfunction or cardiac conduction abnormalities.

Administration of CARDIZEM (diltiazem hydrochloride) concomitantly with propranolol in five normal volunteers resulted in increased propranolol levels in all subjects and bioavailability of propranolol was increased approximately 50%. If combination therapy is initiated or withdrawn in conjunction with propranolol, an adjustment in the propranolol dose may be warranted. (See WARNINGS.)

Cimetidine. A study in six healthy volunteers has shown a significant increase in peak diltiazem plasma levels (58%) and area-under-the-curve (53%) after a 1-week course of cimetidine at 1,200 mg per day and diltiazem 60 mg per day. Ranitidine produced smaller, nonsignificant increases. The effect may be mediated by cimetidine's known inhibition of hepatic cytochrome P-450, the enzyme system probably responsible for the first-pass metabolism of diltiazem. Patients currently receiving diltiazem therapy should be carefully monitored for a change in pharmacological effect when initiating and discontinuing therapy with cimetidine. An adjustment in the diltiazem dose may be warranted.

Digitalis. Administration of CARDIZEM with digoxin in 24 healthy male subjects increased plasma digoxin concentrations approximately 20%. Another investigator found no increase in digoxin levels in 12 patients with coronary artery disease. Since there have been conflicting results regarding the effect of digoxin levels, it is recommended that digoxin levels be monitored when initiating, adjusting, and discontinuing CARDIZEM therapy to avoid possible over- or under-digitalization. (See WARNINGS.)

Anesthetics. The depression of cardiac contractility, conductivity, and automaticity as well as the vascular dilation associated with anesthetics may be potentiated by calcium channel blockers. When used concomitantly, anesthetics and calcium blockers should be titrated carefully.

Carcinogenesis, Mutagenesis, Impairment of Fertility. A 24-month study in rats and a 21-month study in mice showed no evidence of carcinogenicity. There was also no mutagenic response in *in vitro* bacterial tests. No intrinsic effect on fertility was observed in rats.

Pregnancy. Category C. Reproduction studies have been conducted in mice, rats, and rabbits. Administration of doses ranging from five to ten times greater (on a mg/kg basis) than the daily recommended therapeutic dose has resulted in embryo and fetal lethality. These doses, in some studies, have been reported to cause skeletal abnormalities. In the perinatal/postnatal studies, there was some reduction in early individual pup weights and survival rates. There was an increased incidence of stillbirths at doses of 20 times the human dose or greater. There are no well-controlled studies in pregnant women; therefore, use CARDIZEM in pregnant women only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers. Diltiazem is excreted in human milk. One report suggests that concentrations in breast milk may approximate serum levels. If use of CARDIZEM is deemed essential, an alternative method of infant feeding should be instituted.

Pediatric Use. Safety and effectiveness in children have not been established.

ADVERSE REACTIONS

Serious adverse reactions have been rare in studies carried out to date, but it should be recognized that patients with impaired ventricular function and cardiac conduction abnormalities have usually been excluded from these studies.

The adverse events described below represent events observed in clinical studies of hypertensive patients receiving either CARDIZEM Tablets or CARDIZEM SR Capsules as well as experiences observed in studies of angina and during marketing. The most common events in hypertension studies are shown in a table with rates in placebo patients shown for comparison. Less common events are listed by body system; these include any adverse reactions seen in angina studies that were not observed in hypertension studies. In all hypertensive patients studied (over 900), the most common adverse reactions were edema (9%), headache (8%), dizziness (6%), asthenia (5%), sinus bradycardia (3%), flushing (3%), and 1° AV block (3%). Only edema and perhaps bradycardia and dizziness were dose related. The most common events observed in clinical studies (over 2,100 patients) of angina patients and hypertensive patients receiving CARDIZEM Tablets or CARDIZEM SR Capsules were (ie, greater than 1%) edema (5.4%), headache (4.5%), dizziness (3.4%), asthenia (2.8%), first-degree AV block (1.8%), flushing (1.7%), nausea (1.6%), bradycardia (1.5%), and rash (1.5%).

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headache	38 (12%)	17 (8%)
AV block first degree	24 (7.6%)	4 (1.9%)
dizziness	22 (7%)	6 (2.8%)
edema	19 (6%)	2 (0.9%)
bradycardia	19 (6%)	3 (1.4%)
ECG abnormality	13 (4.1%)	3 (1.4%)
asthenia	10 (3.2%)	1 (0.5%)
constipation	5 (1.6%)	2 (0.9%)
dyspepsia	4 (1.3%)	1 (0.5%)
nausea	4 (1.3%)	2 (0.9%)
palpitations	4 (1.3%)	2 (0.9%)
polyuria	4 (1.3%)	2 (0.9%)
somnolence	4 (1.3%)	—
alk phos increase	3 (1%)	1 (0.5%)
hypotension	3 (1%)	1 (0.5%)
insomnia	3 (1%)	1 (0.5%)
rash	3 (1%)	1 (0.5%)
AV block second degree	2 (0.6%)	—

In addition, the following events were reported infrequently (less than 1% have been observed in angina trials. In many cases, the relation to drug was uncertain).

Cardiovascular: Angina, arrhythmia, bundle branch block, tachycardia, atricular extrasystoles, congestive heart failure, syncope.

Nervous System: Amnesia, depression, gait abnormality, hallucinations, vision, paresthesia, personality change, tinnitus, abnormal dreams.

Gastrointestinal: Anorexia, diarrhea, dyspepsia, mild elevations of SGPT, and LDH (see hepatic warnings), vomiting, weight increase, constipation.

Dermatological: Petechiae, pruritus, photosensitivity, urticaria.

Other: Amblyopia, CPK increase, dyspnea, epistaxis, eye irritation, hyperglycemia, sexual difficulties, nasal congestion, nocturnal osteoarthralgia, impotence, dry mouth.

The following postmarketing events have been reported infrequently in patients receiving CARDIZEM: alopecia, gingival hyperplasia, erythema multiforme, and leukopenia. Definitive cause and effect relationship between these events and CARDIZEM therapy cannot yet be established.

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Medical Missions

*W.R. Scurlock, M.D.**

Prior to and even during my medical education, I can well remember looking forward to providing a service to humanity. This eagerness was almost a unanimous feeling among my classmates and fellow residents. I believe this was the attitude we carried with us into practice.

After 25 years of surgical practice, things seem to have changed. Practice becomes, to a certain extent, a routine. Our attention must be directed toward the medical legal aspect, the business side, and the never ending need for continuing education. It is the unusual M.D. who maintains fully the initial attitude toward service which he or she had when entering practice. There may be a longing in all of us to regain some of this. We find out sooner or later that monetary gain is not completely satisfying. We all realize eventually that Christ's teaching, "to gain satisfaction one must become a servant," really is true.

Medical missions to third world countries have satisfied this original desire in many physicians. This is proven by the increasing number of volunteers for short term medical missions. I have been amazed at the number of physicians and nurses who are willing to give of their time to participate in these missions.

For a number of years, a group in the Arkansas, Louisiana and Mississippi area have participated in medical missions to western Honduras. To be perfectly honest, I had a great deal of reluctance to go on that first trip. Having been on a similar mission to Mexico, I was familiar with the idea of performing surgery in rural undeveloped areas. However, I knew nothing of Central America and even less of Honduras. I had read of the political unrest and the border wars with Nicaragua and El Salvador, but had no idea of the extent of poverty, starvation and lack of medical care that existed so near the United States. Newspapers and National Geographic magazine did not depict, at least to me, the true or complete picture.

Someone volunteered my name. I was backed into a corner, so I went. I have been returning ever since. I have yet to meet a physician who had regrets about doing this type of work.

Our particular village is Gualcinse, located in a remote mountainous area of western Honduras near the El Salvador

border. Although there are no mosquitos at this elevation, we recommend the Chloroquine prophylaxis. Also recommended, but not required, are tetanus, diphtheria, polio and gamma globulin. Most of us continue to take the prophylactic dosage of Doxycycline. A passport and photocopies of medical licenses are essential.

All the surgical equipment and supplies have to be brought in by us from the United States. We are indeed grateful to various hospitals, drug companies and surgical supply houses for their contributions.

Like most missions to Central America we depart from New Orleans. From the Honduran capitol of Tegucigalpa, we are flown by small planes to our destination. Gualcinse has no air strip, only a small open field on the mountain side. We have learned to rely heavily on these bush pilots.

Gualcinse is in an isolated area. The roads are very rudimentary. The transportation is by mule. There is no electricity, running water, or sewage. Most of the homes are mud and straw with dirt floors. The native diet is what little corn they can raise. The maintenance and harvesting of scattered coffee trees throughout the mountains provide the only employment.

In these remote areas most people live and die without ever seeing a physician. Honduras is second only to Haiti in infant mortality in the Western Hemisphere. Our missionary in Gualcinse is Leslie Shaw, a former NASA engineer. He has had limited formal training in diagnosis and treatment of medical diseases. This man maintains a small clinic and is as near to a physician as most people see. In his clinic and recently in an adjoining concrete block building, the surgical procedures are done. Within the last few years, we have managed to stock it with the elementary O.R. equipment. A gasoline generator provides the power and an automobile fog light provides an adequate light.

If standard facilities, blood, laboratory, and x-ray were available, most of the surgical procedures would be fairly routine. The common problems are uterine prolapse, hernias, huge ovarian cysts, thyroid goiters, congenital cysts, anomalies, and tumors, and an occasional appendix.

If you have forgotten the real gratification of giving your service, you might consider joining the increasing number of volunteer physicians who have become interested in this type of endeavor. The need is there. The pay is beyond any monetary compensation.

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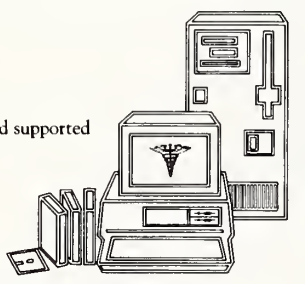
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JUNE 24

Arkansas-Oklahoma Endoscopic Society 1989 Annual Meeting. Sponsored by AEOS. Presented by Walter J. Hogan, M.D., President, ASGE; Edward Cattua, M.D., Chief, Clinical Endoscopy, National Institute of Health; and Peter L. Plumeri, D.O., J.D., Sewell, NJ. Doubletree, Lincoln Centre, Dallas, Texas. 6.5 Category I credit hours. For registration or further information, AOES, 409 North University, Little Rock, AR 72205.

JULY 7-9

Medical Staff Issues. Sponsored by Joint Commission on Accreditation of Health Organizations. The Wort Hotel, Jackson Hole, Wyoming. Eleven hours Category I credit. Fee: \$435. Phone reservations, Joint Commission, (312) 624-6061 (Visa or Master Card). Hotel reservations, 1 (800) 322-2727.

JULY 20

Symposium on Asthma. Sponsored by Washington University School of Medicine. Presented by Phillip E. Korenblat, M.D. Washington University Medical Center, St. Louis, MO. 8.5 Category I credit hours. Fee: \$35.00. Further information, Cathy Caruso, Washington University Medical Center, 660 South Euclid, Box 8063, St. Louis, MO 63110; 1 (800) 325-9862.

JULY 29

Sports Medicine Symposium. Sponsored and presented by the Baptist Medical Center. Further information, Baptist Medical Center, Medical Education Department, (501) 227-2672.

JULY 23-28

Physicians and Their Families. Sponsored by the Menninger Clinic. Presented by Roy W. Menninger, M.D. and Bev Menninger; Becquer Benalcazar, M.D., and Regine Benalcazar-Schmid, M.D.; Glen O. Gabbard, M.D., and Joyce Davidson Gabbard, M.D.; Joseph Hyland, M.D., and Patricia Spiegelberg Hyland, M.D.; and Martin B. Leichtman, Ph.D. and Maria Louisa Leichtman, Ph.D. Grande Butte Hotel, Crested Butte, Colorado. Fee: \$595 per couple. Deadline for registration June 30, 1989. 22.5 Category I credit hours. Further information, Jayne Roberts, Division of Continuing Education, The Menninger Clinic, Box 829, Topeka, KS 66601-0829; 1 (800) 288-7377, ext. 5994.

KEEPING UP

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Self-Study Course for Physicians. Sponsored by the National Heart, Lung and Blood Institute. A national cholesterol education program is available through the Arkansas Medical Society office in which a physician studies at home. Two Category I credit hours. Further information: David Wroten, Arkansas Medical Society, Post Office Box 5776, Little Rock, AR 72215; (501) 224-8967.

Ophthalmology Resident's/Alumni Day

May 26, 7:45 a.m. - 5:00 p.m. Presented by John P. Shock, M.D. Sponsored by University of Arkansas College of Medicine. UAMS, Education II Building, Room G131 A & B. Seven Category I credit hours. Fee: \$35.

Smoking Cessation

June 7, 12:30 p.m. Presented by Russell Williams, ACSW. Sponsored by AHEC Fort Smith. Medical

Library, Sparks Regional Medical Center. One Category I credit hour.

OB Lecture Series

June 12, 1:00 p.m. Presented by William Harrison. Sponsored by UAMS AHEC - Northwest. AHEC - Northwest, 241 West Spring Street.

From the Bench to the Bedside

June 10, 8:00 a.m. Presented by D. H. Berry, M.D. and Donald L. Miller, M.D. Sponsored by UAMS. UAMS Education Building, Room G/141 A & B, with tours to follow. Four Category I credit hours.

ATLS Provider Course

June 9-11, time to be announced. Presented by Robert W. Barnes, M.D. and Charles D. Mabry, M.D. Sponsored

by UAMS. UAMS Education Building. Sixteen Category I credit hours. Fee: \$475.00.

Battering Families

June 20, 12:30 p.m. Presented by Don Beebe, LCSW. Sponsored by AHEC Fort Smith. Medical Library, Sparks Regional Medical Center. One Category I credit hour.

11th Annual Family Practice Intensive Review

June 23-25, Friday and Saturday, 8:00 a.m. - 5:00 p.m.; Sunday, 8:00 p.m. - 2:30 p.m. Registration at 7:30 a.m. Presented by Ben N. Saltzman, M.D. Sponsored by UAMS. UAMS Education Building, Room G/131. 20.25 Category I credit hours. Fee: \$200, physicians; \$100, physician assistants; \$35, residents.

Recurring Education Programs

As organizations accredited for continuing medical education by the Arkansas Medical Society, the organizations named certify that these continuing medical education activities meet the criteria for the credit hours specified in Category I of the Physician's Recognition Award of the American Medical Association.

FAYETTEVILLE - VA MEDICAL CENTER

Medical Conference (varying topics), Fridays, 12:15 p.m., Conference Room, Building 1, VAMC
Mortality/Morbidity Conference, fourth Wednesday, 2:45 p.m., Conference Room, Building 1, VAMC

HOT SPRINGS-AMI NATIONAL PARK MEDICAL CENTER

Continuing Medical Education Luncheon for Medical/Dental Staff, varying topics, alternating Fridays, 12:30 p.m., Fordyce Room, AMI National Park Medical Center

LITTLE ROCK-ARKANSAS CHILDREN'S HOSPITAL

Alternating Sub-Specialty Conference, third Wednesday, 1:30 p.m., Second Floor Classroom
Genetics Conference, Wednesdays, 12:00 noon, Sturgis Building, Room 457
Infectious Disease Conference, second Wednesday, 12:00 noon, Sturgis Building, Room 121
Pediatric Grand Rounds, Tuesdays, 8:00 a.m., Sturgis Building, Auditorium
Pediatric Neuropsychiatry Conference, second Wednesday, 1:30 p.m., Second Floor Classroom
Pediatric Neuroscience Conference, first Thursday, 8:00 a.m., Second Floor Classroom
Pediatric Pathology Conference, first Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Pharmacology Conference, fifth Wednesday, 12:00 noon, Second Floor Classroom
Pediatric Radiology Conference, first Thursday, 12:00 noon, Second Floor Classroom
Pediatric Research Conference, third Monday, 12:00 noon, Sturgis Building, Rooms S120-121
Problem Case Conference, Fridays, 12:00 noon, Second Floor Classroom

LITTLE ROCK-ST. VINCENT INFIRMARY MEDICAL CENTER

Cancer Conference, first Wednesday, 12:00 noon, CARTI Auditorium. A meal is provided.
Cancer Conference, third and fourth Thursday, 12:00 noon, Southwestern Bell Room A meal is provided.
General Medicine Journal Club, Tuesdays, 12:00 noon, Conference Room 1. A meal is provided.
Hematology-Oncology Conference, second Thursday, 12:00 noon, Laboratory Library. A meal is provided.
Interhospital Urology Grand Rounds, first Tuesday, 5:30 p.m., Arkla Room. Refreshments are provided.
Pediatric Conference, first Tuesday, 12:30 p.m., Vincent de Paul Room. A meal is provided.
Peripheral Vascular Disease Conference, fourth Tuesday, 6:00 p.m., Arkla Room. A meal is provided.
Pulmonary Conference, second and fourth Wednesday, 12:00 noon, Southwestern Bell/Arkla Rooms. A meal is provided.

LITTLE ROCK-BAPTIST MEDICAL CENTER

Anesthesiology Conference, third Thursday, 7:00 a.m., Conference Room 1
GI Conference, third Thursday, 12:00 noon, Conference Room 1.
Grand Rounds Conference, Wednesdays, 12:00 noon, Conference Room 1. Lectures and case presentations. A light lunch is provided.
Pathology Conference, third Tuesday, 3:00 p.m., Pathology Library
Pulmonary Conference, Tuesdays, 12:00 noon, Shuffield Auditorium. A light lunch is provided.

As an organization accredited for continuing medical education by the Accreditation Council for Continuing Medical Education, the University of Arkansas for Medical Sciences certifies the following continuing medical education activities meet the criteria for Category I of the Physician's Recognition Award of the American Medical Association.

UNIVERSITY OF ARKANSAS FOR MEDICAL SCIENCES - LITTLE ROCK

ACRC/CARTI Tumor Conference, Wednesdays, 12:00 noon, CARTI Auditorium, Markham & University
ACRC Oncology Forum, fourth Thursday, 4:00 p.m., UAMS Education Building, Room G137
Anesthesia Conference Series, Wednesdays, 4:00 p.m., UAMS Education Building, Room G/110 A&B
CARTI North Tumor Board Cancer Conference, second Wednesday, 12:00 noon, CARTI North, Searcy
Child Psychiatry Clinical Case Conference, first Friday, 1:00 p.m., Arkansas Children's Hospital, Child Study Center Conference Room H5727
Child Psychiatry Research Review, fourth Friday, 1:00 p.m., Arkansas Children's Hospital, Child Study Center Conference Room H5727
Emergency Medicine Didactic Conference 1, Thursdays, 12:00 noon. UAMS Education Building, Room G/110A&B.
Emergency Medicine Didactic Conference 2, Thursdays, 1:00 p.m., UAMS Education Building, Room G/110A&B
Emergency Medicine Grand Rounds 1, third Tuesday, 3:00 p.m., UAMS Education Building, Room B/106A&B
Emergency Medicine Grand Rounds 2, third Tuesday, 4:00 p.m., UAMS Education Building, Room B/106A&B
Emergency Medicine Morbidity and Mortality Conference, fourth Tuesday, 4:00 p.m., UAMS Education Building, Room B/106A&B
Emergency Medicine Radiology Conference, fourth Tuesday, 3:00 p.m., UAMS Education Building, Room B/106A&B
Emergency Medicine Toxicology Conference, first Tuesday, 4:00 p.m., UAMS Education Building, Room B/106A&B
Emergency Medicine Toxicology Rounds, Tuesdays, 3:00 p.m., UAMS Education Building, Room B/106A7B
Interdisciplinary Gynecologic Cancer Conference, Fridays, 12:30 p.m., UAMS Education Building, Room G106 A&B
Medicine Grand Rounds, Thursdays, 12:00 noon, UAMS Education Building, Room G/131A&B
Medicine Research Conference, three Wednesdays per month, 4:30 p.m. Shorey Building, Room 3506
Neurology Clinical Case Conference, Thursdays, 8:00 a.m. Rotates between UAMS (7D33) and LRVAMC (3S) and ACH.
Neuropathology Conference, Thursdays, 10:00 p.m. UAMS Autopsy Room
Neuroscience Conference (Basic), Mondays, 8:00 a.m., UAMS 7D33.
Ob/Gyn Grand Rounds, Wednesdays, 7:30 a.m., UAMS Education Building, Room G/131B
Ophthalmology Problem Case Conference, Thursdays, 4:00 p.m., UAMS AAC Eye Clinic, Room 3/150
Orthopaedic Basic Science Conference, occasional Tuesdays, 11:00 a.m., UAMS Education Bldg., Room B/135
Orthopaedic Bibliography Conference, Tuesdays, 8:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Fracture Conference, Tuesdays, 7:30 a.m., UAMS Education Building, Room B/135
Orthopaedic Grand Rounds, Tuesdays, 10:00 a.m., UAMS Education Building, Room B/135
Psychiatry Grand Rounds, Fridays, 11:00 a.m., UAMS Child Study Center Auditorium
St. Vincent Urology Grand Rounds, first Tuesday, 5:30 p.m., St. Vincent Infirmary, Education Building, Room 159
Surgery Fundamental Sciences Conference, first Tuesday, 6:00 p.m., UAMS Chancellor's Area, Conference Room B-2
Surgery Grand Rounds, one Saturday per month,, 8:00 a.m., UAMS Education Building, Room G/141A
Surgery Morbidity and Mortality Conference, Wednesdays, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Resident Case Conference, Mondays, 5:00 p.m., UAMS Education Building, Room G/141A
Surgery Review Conference, Mondays, 6:00 p.m., UAMS Education Building, Room G/141A
Urology Basic Sciences Conference, second Tuesday, 5:00 p.m., UAMS Education Building, Room G/106A&B
Urology Clinical Didactic Conference, third Tuesday, 5:00 p.m., UAMS Urology Office, Room 2508
Urology Conference (Pediatric), once monthly, 5:00 p.m., Arkansas Children's Hospital, Sturgis Building, Clinic 2
Urology Core Conference, once or twice monthly, 5:00 p.m., UAMS Urology Office, Room 2508
Urology Grand Rounds, second and fourth Tuesday, 5:00 p.m., VAMC-LR (4D)
Urology Morbidity and Mortality Conference, last Wednesday, 5:00 p.m., UAMS Urology Office, Room 2508
Urology Teaching Conference, one or twice monthly, 5:00 p.m., UAMS Urology Office, Room 2508
Uro-Radiology Workshop (Urologic Imaging), once monthly, 5:00 p.m., UAMS Urology Office, Room 2508
VA Chest Conference (Combined Surgical/Medical Chest Conference), alternating Mondays, 12:15 p.m., VAMC-LR, Room 2D109
VA Diagnostic Imaging Conference, Monday-Thursday, 8:00 a.m., VAMC-LR Nuclear Medicine Conference Room, Room 1D173
VA Lung Cancer Conference (combined Medical/Surgical Lung Cancer Conference), Tuesdays, 3:00 p.m., LRVA, Room 2E142
VA Medical Service Teaching Conference, Thursdays, 8:00 a.m., VAMC-NLR, Building 68
VA Physical Medicine and Rehab Grand Rounds, fourth Friday, 11:00 a.m., VAMC-NLR Building 68, Room 118 or Arkansas Rehab Institute
VA Surgery Grand Rounds, Thursdays, 12:45 p.m., VAMC-LR, Room 2D109, 1.25 credit hours
VA Topics in Rehabilitation Medicine, Thursdays, 8:00 a.m., VAMC-NLR Building 68, Room 118
VA Weekly Tumor Conference, Tuesdays, 4:00 p.m., VAMC-LR, Pathology Conference Room
Vascular/Radiology Conference, Tuesdays, 5:00 p.m., UAMS Education Building, Room G/131A&B

EL DORADO - AHEC

Behavioral Sciences Conference, first and fourth Friday, 12:15 p.m., AHEC - South Arkansas.
Chest Conference, third Wednesday, 12:30 p.m., Wamer Brown Hospital
Gynecology-Pathology Conference, second Friday, 12:15 p.m., AHEC-South Arkansas
Internal Medicine Conference, first, second and fourth Wednesday, 12:15 p.m., AHEC-South Arkansas
Pathology Conference, second Tuesday, 12:15 p.m., AHEC-South Arkansas
Pediatric Conference, last Monday, 12:15 p.m., AHEC - South Arkansas
Obstetrics-Gynecology Conference, fourth Thursday, 12:15 p.m., AHEC-South Arkansas
Surgical Conference, first, second and third Monday, 12:15 p.m., AHEC-South Arkansas
Tumor Clinic, fourth Tuesday, 12:15 p.m., AHEC-South Arkansas

FAYETTEVILLE - AHEC NORTHWEST

Cardiology Lecture Series, first Monday, 1:00 p.m., Washington Regional Medical Center

Family Medicine Conference, varying dates through April, May, and June, 1:00 p.m., AHEC - NW, 241 W. Spring, Fayetteville. Contact AHEC - NW for list of dates.

Nephrology Lecture Series, fourth Thursday, 12:30 p.m., AHEC- NW, 241 W. Spring, Fayetteville

Rheumatology Lecture Series, first Tuesday, 12:30 p.m., VA Medical Center

FORT SMITH - AHEC

Internal Medicine, first Tuesday, 12:30 p.m., Medical Library, Sparks Regional Medical Center

JONESBORO-AHEC NORTHEAST

AHEC Lecture Series, first and third Tuesday, 12:00 noon, Stroud Hall, St. Bernard's Annex Building

Arkansas Methodist Hospital CME Conference, last Friday, 7:00 a.m., Arkansas Methodist Hospital, Paragould

Cherokee Village Tumor Conference, third Monday, every four months, 6:00 p.m., Ozark Baptist Memorial Hospital, Cherokee Village.

Chest Conference, fourth Tuesday, 12:00 noon, St. Bernard's Dietary Conference Room

Independence County Medical Society, second Tuesday, 7:30 p.m., White River Medical Center, Batesville

Interesting Case Conference, second and fifth Tuesday, when applicable, 12:00 noon, St. Bernard's Dietary Conference Room

Kennett Tumor Conference, second Tuesday (every other month), 12:00 noon, Twin Rivers Regional Medical Center, Kennett, MO

Methodist Hospital of Jonesboro CME Staff Conference, second Tuesday, 7:30 p.m., Cafeteria, Methodist Hospital of Jonesboro

Monthly Medical Lecture Series, third Tuesday, 7:30 p.m., rotates each month between Walnut Ridge and Pocahontas

Neurological-Neurosurgical Conference, first Monday, 12:00 noon, St. Bernard's Dietary Conference Room

Neuroradiology Conference, second Friday, 12:00 noon, St. Bernard's Dietary Conference Room

Newport Tumor Conference, second Wednesday, 12:00 noon, rotates each month between Harris Clinic and Newport Hospital

Perinatal Conference, second Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room

Piggott Tumor Conference, third Wednesday, 12:00 noon, Piggott Hospital, every four months.

Poplar Bluff Tumor Conference, third Wednesday, 12:00 noon, Lucy Lee Hospital, Poplar Bluff.

Tumor Conference, fourth Wednesday, 12:00 noon, St. Bernard's Dietary Conference Room

PINE BLUFF-AHEC

Behavioral Science Conference, first and third Thursday, 12:00 noon, Jefferson Regional Medical Center

Chest Conference, second and fourth Friday, 12:00 noon, Jefferson Regional Medical Center

Family Practice Conference, first and fourth Tuesday, 12:00 noon, Jefferson Regional Medical Center

Geriatrics Conference, third Friday, 12:00 noon, Jefferson Regional Medical Center

Internal Medicine Conference, second and fourth Wednesday, 12:00 noon, Jefferson Regional Medical Center

Obstetrics/Gynecology Conference, second Tuesday, 12:00 noon, Jefferson Regional Medical Center

Orthopedic Case Conference, second and fourth Thursday, 12:00 noon, Jefferson Regional Medical Center.

Pediatric Conference, third Wednesday, 12:00 noon, Jefferson Regional Medical Center

Radiology Conference, third Tuesday, 12:00 noon, Jefferson Regional Medical Center

Southeast Arkansas Medical Lecture Series, fourth Tuesday, 6:30 p.m., Pine Bluff County Club. Dinner meeting.

Surgery Conference, first Friday, 12:00 noon, Jefferson Regional Medical Center

Tumor Conference, first Wednesday, 12:00 noon, Jefferson Regional Medical Center

TEXARKANA-AHEC SOUTHWEST

Cardiology Conference, Fridays, 12:00 noon, alternates between St. Michael Hospital and Wadley Regional Medical Center

Chest Conference, third Wednesday, 12:30 p.m., St. Michael Hospital.

Cine Radiology, second Friday, 12:00 noon, Wadley Regional Medical Center.

Echo-Cardiology, fourth Friday, 12:00 noon, Wadley Regional Medical Center

Internal Medicine Conference, second Tuesday, 12:00 noon, alternates between St. Michael Hospital and Wadley Regional Medical Center

Neuro-Radiology Conference, second and fourth Wednesday, 7:00 a.m. breakfast, Wadley Regional Medical Center

Surgeons Pathology Conference, second Tuesday, 7:00 a.m. breakfast, Wadley Regional Medical Center

Tumor Conference, first Wednesday, 7:00 a.m. breakfast, St. Michael Hospital

Memorials honoring Arkansas Medical Society members and their families can be made to the Medical Education Foundation for Arkansas (MEFFA), Post Office Box 5776, Little Rock, Arkansas 72215.

AIDS IN ARKANSAS 1989

January 1 - March, 1989

Total number of cases reported		20	CASES BY AGE GROUP	
Number of deaths		6	Less than 20	1
			20 - 29	6
			30 - 39	10
			40 - 49	1
			50 - 59	2
			60 or more	0
CASES BY SEX				
Male		16		
Female		4		
CASES BY RACE			OPPORTUNISTIC DISEASE	
White		13	Pneumocystic Carinii	5
Black		7	Kaposi's Sarcoma	1
			Pneumocystis Carinii	
			and Kaposi's Sarcoma	0
			Other Diseases	14
CASES BY RISK GROUP				
Homosexual/Bisexual*		7		
Homosexual & IV Drug User		5		
IV Drug User		5		
Hemophiliac		0		
Transfusion		0		
Heterosexual (Contacts)		2		
NIR#		1		
# No identified risk group (NIR)				

AIDS IN ARKANSAS 1985 - 1989

Total number of cases reported		193	CASES BY AGE GROUP	
Number of deaths		112	Less than 20	3
			20 - 29	64
			30 - 39	84
			40 - 49	27
			50 - 59	8
			60 or more	7
CASES BY SEX				
Male		178		
Female		15		
CASES BY RACE			OPPORTUNISTIC DISEASE	
White		148	Pneumocystic Carinii	88
Black		44	Kaposi's Sarcoma	9
Other		1	Pneumocystis Carinii	
			and Kaposi's Sarcoma	5
			Other Diseases	91
CASES BY RISK GROUP				
Homosexual/Bisexual*		115		
Homosexual & IV Drug User		33		
IV Drug User		22		
Hemophiliac		1		
Transfusion		9		
Heterosexual (Contacts)		9		
NIR#		4		
# No identified risk group (NIR)				

Source: Arkansas Department of Health.

MEDICINE IN THE NEWS

ASIM's Medicare Brochure Updated

The American Society of Internal Medicine (ASIM) has revised its popular patient brochure, "Medicare: What It Will And Will Not Pay For," to explain the new catastrophic coverage law that significantly changes Medicare coverage for 33 million Americans. The popular patient brochure has also been updated with the latest information on the premiums, deductibles and copayments in effect for 1989.

The Health Care Financing Administration, which reviewed the brochure for accuracy of content, has called it one of the clearest explanations available on the federal health insurance program for the elderly.

The brochure spells out what Medicare is, who is eligible and how beneficiaries can claim benefits. It explores the participating-nonparticipating option, and points out that patients do not have to go to a participating physician to claim Medicare benefits. It explains what is meant by "reasonable," "customary," and "prevailing" charges and what "assigned" and "unassigned" claims are - and how to obtain reimbursement for them. Also included is a section on the "medically unnecessary" and refund provisions, and a detailed summary of what is and isn't covered under hospital (Part A) and medical (Part B) insurance.

To order, send a check payable to ASIM's Literature Order Dept. NR, 1101 Vermont Avenue, NW; Suite 500, Washington, D.C. 20005-3457, or call (202) 289-1700. Visa and MasterCard accepted. The cost is \$34 per 100; \$153 per 500; and \$272 per 1,000 (ASIM members will receive a 10% discount).

History of Medicine Division receives Gift

The Medical Education Foundation for Arkansas (MEFFA) has awarded a third major gift to the History of Medicine Division of the University of Arkansas for Medical Sciences Library. The History of Medicine Associates, a group dedicated to enhancing the UAMS History of Medicine Division, recently receive \$10,000 from MEFFA. It is the Associates' third \$10,000 grant from MEFFA in five years.

Members of the Arkansas Medical Society created MEFFA to promote the art and science of medicine and the betterment of public health.

Edwina Walls, UAMS archivist and Associates treasurer, said the organization is overwhelmed by

MEFFA's continued interest and support. "The previous grants from MEFFA have certainly enriched our collection and have assisted in the preservation of Arkansas' medical history," she commented.

Walls said the most recent grant will be used to purchase rare books, classics or manuscripts, to restore/repair bindings of rare books, to underwrite exhibit fees and/or special projects, to pay appraiser's fees for items being considered for addition to the collection, to selectively purchase reprints or facsimile editions, to purchase secondary study resources, and to purchase computer software that will make the archival collections more available to history of medicine researchers.

Medical Carrier Review Available

A publication designed to give physicians and their staffs a thorough understanding of medicare's "medical necessity" requirements, and the carrier review process in general, has been developed by the AMA.

Medicare Carrier Review: What Every Physician Should Know About "Medically Unnecessary" Denials, was prepared by the AMA with technical assistance from the federal Health Care Financing Administration, and is available to physicians.

The 60-page booklet attempts to eliminate some of the confusion that has accompanied implementation of the Omnibus Budget Reconciliation Act of 1986.

In addition to explaining the law and the carrier claims review process, the booklet discusses ways physicians can appeal carrier determinations about "medically unnecessary" services. Also included is an extensive explanation of "advance notice" provisions, which, if used properly, nullify refund requirements.

The booklet gives advice on working within the process, avoiding time-consuming complications, and obtaining prompt assistance. It includes a listing of names, telephone numbers, and addresses of helpful medical society contacts in each state; Medicare contacts; and HCFA regional offices where assistance can be obtained. The publication also contains a glossary of Medicare terminology.

Copies are \$10 for AMA members and \$12.50 for non-members. VISA and MasterCard orders may be placed by calling toll-free 1 (800) 621-8335. Pre-paid orders can be sent to the AMA, Post Office Box 10946, Chicago, IL 60610-0946, listing the publication number OP-198.

Physician Expert Witness Statement

A Statement of Qualifications and Guidelines for the Physician Expert Witness was recently adopted by the Council of Medical Specialty Societies (CMSS) assembly. The statement is intended for all types of liability suits in which a physician might serve as an expert witness.

A preamble provides the rationale for development of the statement, citing the need for objective and unbiased testimony by qualified physicians following guidelines delineated in the statement. The statement contains two sections: one offers specific recommendations for qualifications of physician expert witnesses; another sets forth recommended guidelines for behavior of the physician expert witness.

The statement, which originated in the CMSS Patient Safety Committee was coordinated by Dr. Andrew Patterson, CMSS representative from the American Academy of Orthopaedic Surgeons. It represents the culmination of careful review of state statutes, and review of expert witness policy statements developed by specialty societies.

The statement, including the preamble, reads:

Physicians are frequently called upon to serve as a medical expert witness in a variety of court proceedings. At the present time, in many courts, criteria or guidelines for expert witnesses are inadequate and, as a result, any physician can testify as an expert witness. It is in the public interest that medical expert testimony be readily available, objective, and unbiased. To limit uninformed and possible misleading testimony, expert witnesses should be qualified for their role and should follow some clear and consistent set of ethical guidelines. Recommendations for each are set forth below. These recommendations are not meant to refer to the treating physician who is called upon to testify in that capacity.

I. Recommended Qualifications for the Physician Expert Witness

- a. The physician expert witness must have a current, valid, and unrestricted license to practice medicine in the state in which he or she practices.*

- b. The physician expert witness should be fully trained in a specialty or a diplomate of a specialty board recognized by the American Board of Medical Specialties, and qualified by experience or demonstrated competence in the subject of the case. The specialty of that physician should be appropriate to the subject matter in the case.*
- c. The physician expert witness should be familiar with the clinical practice of the specialty or the subject matter of the case at the time of the occurrence, and should be actively involved in the clinical practice of the specialty or the subject matter of the case for three of the previous five years at the time of the testimony.*
- d. The physician expert witness should affirm that not more than twenty(20) percent of his/her practice activities involve serving as a expert witness.*

II. Recommended Guidelines for Behavior of the Physician Expert Witness

- a. The physician expert witness should review the medical information in the case and testify to its content fairly and impartially.*
- b. The physician expert witness should review the standards of practice prevailing at the time of occurrence.*
- c. The physician expert witness should be prepared to state the basis of the testimony presented, and whether it is based on personal experience, specific clinical references, or generally accepted opinion in the specialty field.*
- d. Compensation of the physician expert witness should be reasonable and commensurate with the time and effort given to preparing for deposition and court appearance. It is unethical for a physician expert witness to link compensation to the outcome of the case.*
- e. The physician expert witness should be aware that transcripts of depositions and courtroom testimony are public records, subject to independent peer review.*

AMS NEWSMAKERS

Thomas Simpson, M.D., a Harrison obstetrician and gynecologist, was honored with a reception at the Boone County Health Unit for his 23 years of service of the Arkansas Department of Health. Dr. Simpson was presented with a plaque and Rep. Bob Watts presented a resolution passed by the state House of Representatives honoring Simpson.

Joe T. Martindale, M.D., a Benton general practitioner, has been named as the medical director for the New Beginnings Alcohol and Drug Treatment Center at Southwest Hospital. The 28-bed unit is designed for treatment of chemical dependency for adolescents between the ages of 12 and 17. Dr. Martindale is the chairman of the AMS Physicians' Health Committee, which provides

help with physicians suffering with alcohol or chemical dependency.

The American Academy of Facial Plastic and Reconstructive Surgery has named **Jim L. English, M.D.**, as a fellow. Dr. English is a plastic surgeon in Little Rock.

Dr. Kent Westbrook, a Little Rock general surgeon and oncologist, has joined the board of Pulaski Bank and Trust Company. Dr. Westbrook is the director of the Arkansas Cancer Research Center and a professor of surgery at the University of Arkansas for Medical Sciences.

The Craighead-Poinsett Medical Society and Auxiliary honored nine local physicians with over 25 years of medical service each with a reception. **Dr. and Mrs. Jim Schrantz** were the hosts of the reception for **Drs. John Kirkley, William Keisker, O. H. Clopton, H. D. Alston, Charles Kemp, F. M. Wilson, Ernest Hogue, William Garner and Barrett Sparks**. The reception was part of the festivities planned for Doctors Day.

Dr. Jerry Mann of Little Rock was appointed chairman of the Committee on Drugs and Devices of the American Academy of Family Physicians, a national organization for family doctors. Mann will help maintain surveillance of regular and legislative activities relating to drugs, foods, pharmaceuticals and therapeutic agents.

Dr. Hampton Roy, a Little Rock ophthalmologist, and his wife, Nancy, recently received the Arkansas Heritage Award, Henry Award, presented to them at the 1989 Arkansas Governor's Conference in Jonesboro. The Roys received the award for their contribution to historic preservation. They have renovated 25 structures in the

central Arkansas area, including the Kramer School, built in 1895, the oldest standing school building in Little Rock. At the present time, the Museum of Science and History is interested in using the building.

Garland County's Head Start Program recently honored **Catherine R. Slaton, M.D.**, a Hot Springs pediatrician, with their volunteerism award. The award was given in appreciation for Dr. Slaton's time while serving on the Health Advisory Board of the Head Start program.

Joseph Beck, M.D., a Little Rock hematologist, represented the AMS Committee on AIDS at the AMA Youth HIV Education Project held in Washington, D.C. recently. Dr. Beck participated in a roundtable discussion with other physicians concerning their states' AIDS education programs.

One of the new Jefferson County Medical Assistants physician advisors for 1989-90 is **Stephen D. Shorts, M.D.**, of Pine Bluff. Dr. Shorts is an otolaryngologist.

J. E. McDonald, M.D., a Fayetteville ophthalmologist, gave the keynote address at the Arkansas Junior Science and Humanities Seminar at Arkansas Tech University in Russellville. Dr. McDonald is the director of the World Eye Foundation. Dr. McDonald's topic was, "Technology with Touch."

William N. Jones, M.D., of Little Rock, spoke about AIDS to 150 technical personnel and engineers at the Exxon Refinery in Louisiana recently. Dr. Jones' presentation was taped and will be presented to all Exxon employees at that plant. Dr. Jones is a dermatologist and the chairman of the AMS Committee on AIDS.

NEW MEMBERS

GARLAND COUNTY MEDICAL SOCIETY

Wyatt, Richard A., Obstetrics and Gynecology, Hot Springs. Born July 18, 1952, Fort Worth, TX. Pre-medical education, Oklahoma State University, Tulsa Junior College, University of Oklahoma. Medical education, University of Oklahoma College of Medicine, 1981. Internship/residency, University of Arkansas for Medical Sciences. Military record, Wilford Hall USAFMC, Lackland AFB, TX. Board eligible.

INDEPENDENCE COUNTY MEDICAL SOCIETY

Brown, Verona T., Family Practice, Batesville. Born December 5, 1954, Jonesboro, AR. Pre-medical education,

Arkansas State University, B.S., 1977. Medical education, University of Arkansas for Medical Sciences, 1982. Internship/residency, UAMS. Practice experience, Fayetteville, 3 years; Batesville, 1 year. Board certified, family practice. Member, AAFP.

MISSISSIPPI COUNTY MEDICAL SOCIETY

Hau, Leslie W., Internal Medicine, Blytheville. Born March 24, 1956, Victoria, TX. Pre-medical education, Bethany Nazarene College, Bethany, OK, B.S., 1977. Medical education, Washington University School of Medicine, St. Louis, MO, 1981. Internship/residency, Bethesda Naval Hospital. Military record, U.S. Navy, 1981-1988. Board certified, internal medicine. Member, ACP.

PULASKI COUNTY MEDICAL SOCIETY

Hedges, Harold H., Family Medicine, Little Rock. Born June 28, 1958, Little Rock. Pre-medical education, Southwestern, Memphis. Medical education, University of Arkansas for Medical Sciences, 1984. Internship/residency, UAMS. Board eligible, family practice.

Stone, Van, Pediatrics, Little Rock. Born August 20, 1957, Marks, MS. Pre-medical education, Mississippi College, Clinton, MS, B.S., 1979. Medical education, University of Mississippi, Jackson, 1988. Internship/residency, UAMS. Practice experience, Clinton, MS, 1 year. Board certified, pediatrics.

RESIDENT SECTION

Matchett, W. Jean, Radiology. Born October 24, 1956, Conway, AR. Pre-medical education, University of Central Arkansas, Conway, B.S.E., 1978. Medical education, University of Arkansas for Medical Sciences, 1988. Internship/residency, UAMS.

Wallis, Mark S., Dermatology. Born April 22, 1963, San Antonio, TX. Pre-medical education, Texas A & M University, College Station, TX. Medical education, University of Texas Health Science Center, 1988. Internship/residency, University of Arkansas for Medical Sciences.

TAKE THE FIRST STEP TO RECOVERY

The Physicians' Health Committee exists for you, the physician who is struggling with drug or alcohol addiction. The committee is composed primarily of physicians who have "been there" and want only to help their colleagues from making the same mistakes.

The Committee members are willing to set up interventions, recommend treatment, and help with aftercare and re-entry.

The Committee is not involved in any legal, moral or punitive judgements.

ON CALL FOR YOU

Don't throw away your profession because of drugs and alcohol. Contact our Physicians' Confidential Assistance Hotline at (501) 370-8221. Only specially trained personnel will return your call. Or contact the Arkansas Medical Society office at (501) 224-8967 or 1-800-542-1058 and ask for the name of one of the Physicians' Health Committee members.

All inquiries are confidential within the Committee and no names or locations are necessary when contacting the Society office.

JOURNAL OF THE ARKANSAS MEDICAL SOCIETY

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(O) Original Article; (SP) Special Article; (OB) Obituary; (R) Resolution; (E) Editorial; (LE) Letter to Editor

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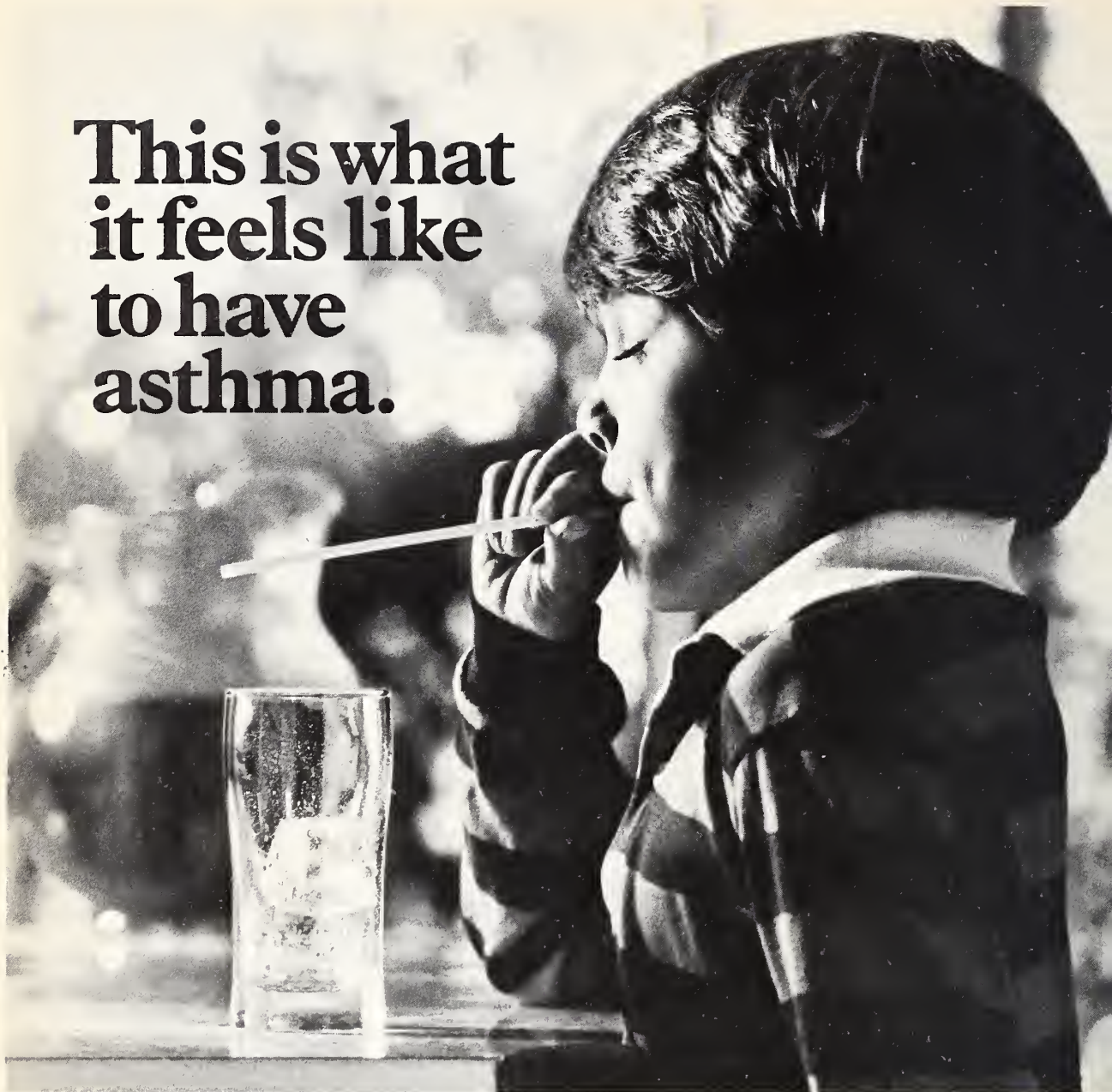
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